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ABSTRACT

This catalog is designed to provide Government agencies in Washington, D.C., with information on local educational and training resources. Its purpose is to aid personnel officers and training directors in planning educational programs for lower-level Federal employees that will lead to greater job efficiency and further advancement. Sections I and II consist of an introduction and instructions for using the catalog. In the largest section (III), courses are listed alphabetically under subject headings, and the number of credits, local institution, and course length and description are provided for each. Prerequisites are given where applicable. Subsequent sections focus on high school completion and the GED; Certificate and Degree Programs, One- and Two-Year Curriculums, and a Directory of Schools (listed in the catalog, with general information on each). Appendices I and II consist of sample programs for completing high school and a two-year certificate or degree, respectively. An index of courses is provided. (KM)

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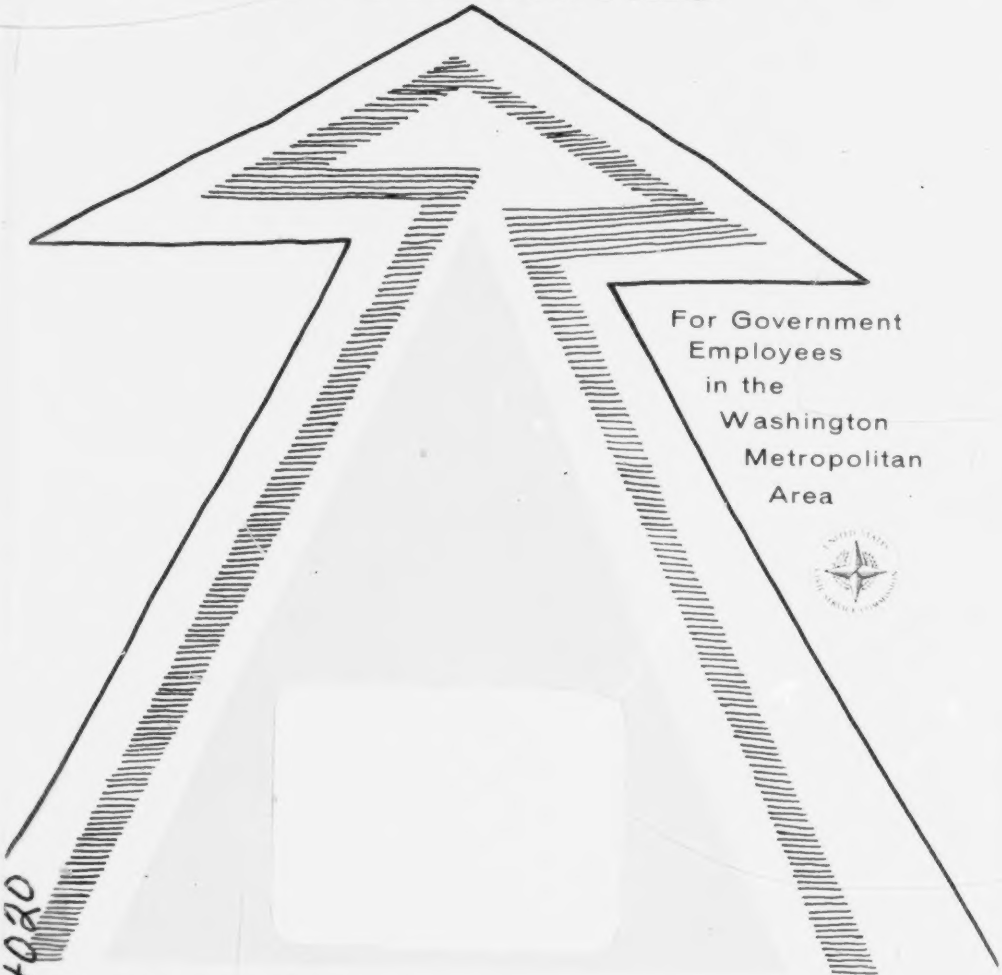
A CATALOG FOR

ADULT CONTINUING EDUCATIONAL OPPORTUNITIES



For Government
Employees
in the
Washington
Metropolitan
Area

U.S. CIVIL SERVICE COMMISSION • BUREAU OF TRAINING

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ADULT CONTINUING EDUCATIONAL OPPORTUNITIES

A Catalog for Government Employees in the Washington Metropolitan Area

United States Civil Service Commission
Bureau of Training
Training Assistance Division

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I. Introduction

The Adult Continuing Educational Opportunities Catalog is designed to provide available information on local educational and training resources to Government agencies. Its primary purpose is to aid personnel officers and training directors in planning programs for lower-level Federal employees in the Washinton, D.C. area. The courses listed in the catalog have been selected for their usefulness to these employees either to benefit their present capabilities or to expand them for further promotion.

In a memorandum to Heads of Departments and Agencies on Equal Employment Opportunity on August 8, 1969, the President said:

> "Equality of opportunity . . . includes the opportunity for all persons, with full recognition of their dignity as individuals, to seek and to achieve their highest potential and productivity in employment situations."
>
> "While we must continue to search out qualified personnel from all segments of our population, we must now assure the best possible utilization of the skills and potential of the present work force. Employees should have the opportunity to the fullest extent practicable to improve their skills so they may qualify for advancement."

In May of 1970, Chairman Robert E. Hampton of the Civil Service Commission forwarded a memorandum to heads of agencies in which he described a program of action that could be used by agencies to implement the Upward Mobility Program for lower grade employees.

Among the items included, which correspond to broad action areas and specific suggested agency actions described in the Chairman's memorandum, is the sub-item, "Education and Training." Some specific actions which agencies may take within this area to implement upward mobility are as follows:

a) Establishment or expansion of training for lower level employees to aid them to qualify for advancement and to improve their long term potential;

b) Relating development opportunities to individual career plans and providing these opportunities on-site and on-the-clock when economical and feasible;

c) Active sponsorship of high school equivalency certification programs to qualify employees for their next developmental step;

d) Utilization of training agreements to provide for accelerated advancement;

e) Advance payment for after-hours correspondence, adult education and college-level courses to help employees qualify for positions approved as part of individual career development plans;

f) Assistance to educational institutions in relating courses and materials to Federal programs.

A portion of the Chairman's memorandum speaks to career counseling and guidance. The following excerpt is from "Suggested Goals:"

> "Provide counseling and guidance to as many lower level employees as possible to encourage and assist them in planning and achieving occupational training, education and career goals, as they relate to the needs of the individual, the agency, and the Federal service,"
>
> Such counseling and guidance should include:
>
> - A realistic appraisal of the individual's interest and potential;
> - Complete information on job opportunities within the agency's career system, and
> - Full knowledge of educational, training and developmental opportunities available.

As an initial step in implementing this support action, the Bureau of Training in the Civil Service Commission has surveyed the Washington metropolitan area for educational opportunities available to adults that will aid in their individual upward mobility. The institutions providing the courses listed in this catalog have been selected according to the following criteria:

- Institutions located in and conveniently accessible to Washington, D.C. A twenty mile radius was selected for surveying purposes and has been adherred to as closely as possible.
- Institutions publicly operated and financed as well as Federally subsidized. This criteria excludes privately financed or endowed institutions, profit-making institutions, institutions regulated by self-perpetuating boards of trustees, and many religious institutions. However, some religious schools offering basic and adult education

either free or so moderately priced as to be noncompetitive have been included. In addition, these schools are in the core of the city and are easily accessible to inner city residents.

- Institutions offering courses relevant to government employment and whose requirements for admission do not preclude GS–7 and below (or equivalent) personnel from applying.

The Adult Continuing Educational Opportunities Catalog is intended primarily for government personnel in the Washington, D.C. metropolitan area and contains information on adult basic, vocational and technical educational opportunities currently available exclusively in this locale. The courses and training opportunities that have been included are intended specifically for lower level employees who are generally non-professionals or sub-professionals at Grades GS–7 and below or equivalent levels.

When using this catalog training and personnel officers are reminded of the care and determination cited in the Chairman's memorandum:

> " . . . to train employees without being able to give them opportunities to utilize their training would be unwise; to provide career counseling which is not geared to realistic opportunities would be harmful . . ."

Training should be planned in conjunction with job opportunities. Any counseling by training and personnel officers should assess all possibilities for upward mobility of government employees who have potential for advancement.

The information compiled in the catalog is current up to the time of publication. The catalog is a supplement to other related publications issued on a regular basis by the Civil Service Commission. These related publications are:

Interagency Training Programs Catalog—

- contains information on interagency training programs available almost exclusively in the Washington, D.C. metropolitan area.

Quarterly Calendar of Interagency Training Programs—

- published four times during each fiscal year; lists course dates, nomination deadlines, course titles and corresponding page numbers in Catalog for course information.

Agency Training Centers for Government Employees—

- compilation of separate facilities established by agencies to conduct special agency-oriented training primarily for their own employees, but with other agency participation on a space-available basis.

Off-Campus Study Centers for Government Employees—

- lists facilities established through cooperative arrangements between colleges or universities and Federal agencies to sponsor continuing education opportunities for government employees. The brochure describes the centers, lists courses offered, admission requirements and provides a contact for further information.

II. How To Use The Catalog

The catalog has been structured as simply as possible in order to accommodate the quantity of material and to facilitate its use.

The Table of Contents divides the main sections of the catalog and broadly identifies the courses themselves. If there is any difficulty in locating a particular subject, the reader should refer to the index which is a comprehensive alphabetical listing. The index provides the corresponding page number of all subjects included in the catalog.

When turning to the course descriptions the reader will find that the name of the course is the same as the one used by the school where it is offered. The number(s) appearing in parenthesis next to the course description is the school's catalog number. This has been included, where available, for easy reference either when contacting the school directly or looking through the school's catalog. Example:

INTRODUCTORY ACCOUNTING I. (BUSI 103).

Three credits, one semester.

Subject matter includes theories of debits and credits, underlying principles of various accounting records, bases of accounting entries, problems of profit and loss, balance sheets, controlling accounts, and related topics. Ample outside work is provided in the form of laboratory problems.

Prince George's Community College

Details on how to apply, where to apply, how much the course will cost and who can be contacted are included in the Directory of Schools. The first page of the Directory is an alphabetical listing of all the schools whose courses have been included in the catalog. Corresponding page numbers locating the schools also appear on this page.

The information compiled in this catalog is current up to the time of publication. Tuitions will most likely change, but not as rapidly as the exact time and location of various courses. Consequently, tuition information is included, but the other information is not. To obtain current information you are encouraged to contact the institutions themselves. In most cases tuition information will be found in the Directory of Schools, beginning on page 334.

III. Course Descriptions

ACCOUNTING

ACCOUNTING

Non-credit, one semester.

Emphasis will be placed on simple and essential accounting for the small businessman, self-employed persons and individuals requiring a general knowledge of financial record keeping. The double-entry system will be explained in the class, along with the use of various types of journal, ledger and the preparation of bank reconciliation. Payroll records, income and expense statement, balance sheet, and the impact of taxes will also be explained. Evening classes.

Prerequisite: None.

Montgomery County Public Schools

ACCOUNTING

Non-credit, one semester.

Evening classes are held twice a week in accounting.

Prince George's County Public Schools

ACCOUNTING I, II, III (ACCT 111, 112, 113)

Four credits, one quarter each.

The student will become adept with fundamentals of accounting. The accounting cycle, journals, ledgers, working papers, and the preparation of financial statements under the various forms of business ownership will be covered in this course.

Northern Virginia Community College

SURVEY OF ACCOUNTING (AC 200)

Three credits, one semester.

An introduction to the structure of accounting, including the nature, preparation, analysis and interpretation of accounting reports; emphasis will be on budgeting, cost accounting, and internal accounting controls as integral parts of business decisions in the management process.

Montgomery College

INTRODUCTORY ACCOUNTING I (BUSI 103, BUSI 104)

Three credits, one semester each.

BUSI 103 Subject matter includes theories of debits and credits, the underlying principles of various accounting records, bases of accounting entries, problems of profit and loss, balance sheets, controlling accounts, and related topics.

BUSI 104 This course covers the fundamental principles and problems involved in accounting for proprietorship, partnership, and corporations, the analysis and interpretation of financial statements, and related topics.

Prerequisite: BUSI 103.

Prince George's Community College

INTRODUCTORY ACCOUNTING

Non-credit, one semester.

Preparation, uses, and limitations of financial reports are studied along with basic financial reporting concepts and data accumulation and processings. An introduction to managerial accounting-financial programming, cost determination, and analysis of financial statements are also covered.

Prerequisite: Knowledge of Basic Math.

Washington Saturday College

INTRODUCTORY ACCOUNTING I, II THEORY AND PRACTICE (A-101, 102)

Three credits, one trimester each.

A–101 First half of this basic course is for both accounting majors and non-majors. The primary emphasis is on the meaning of the basic accounting equation within the framework of which business transactions are analyzed, recorded, and reported in the balance sheet and income statement. The student is also introduced to the appreciation of the role of accounting in internal management decision-making and control.

A–102 This course is the second half of the basic accounting course. The emphasis is on the more thorough examination of the assets, liabilities, and proprietorship accounts which make up the accounting equation developed in the first half.

Prerequisite: A–101.

Southeastern University

ELEMENTARY ACCOUNTING (COMM 1, COMM 2)

Three credits, one semester each.

COMM 1 This course will introduce the beginner to the field of accounting.

COMM 2 This is a continuation of Elementary Accounting, COMM 1.

Prerequisite: COMM 1, Elementary Accounting.

University of Virginia

PRINCIPLES OF ACCOUNTING I, II, & III (BA 201, 202, 203)

Four credits, one quarter each.

This is a three-quarter course taken in sequence of Accounting Principles I, II, & III. The first course includes the basic accounting cycle and preparation of financial statements for a sole proprietorship. The second course considers various accounting systems and concepts and expands the study of business organizations to include partnerships and corporations. The third course includes a survey of major study areas of accounting such as cost accounting, budgeting, managerial accounting, and financial statement analysis.

Federal City College

PRINCIPLES OF ACCOUNTING I, II, III (ACCT 211, 212, 213)

Three credits, one quarter each.

Attention is directed in the course on accounting principles and their application to various forms of business inventory valuation, internal control systems, manufacturing processes, budgeting and analysis of financial statements.

Northern Virginia Community College

PRINCIPLES OF ACCOUNTING (BSAD 020, 021)

Three credits, one semester each.

This course covers the principles of accounting for business enterprise and the use of accounting data in making business decisions.

University College

PRINCIPLES OF ACCOUNTING—FIRST HALF (6–352A)

Three credits, one semester.

The first half of this course will cover the elementary principles of accounting. At the end of the semester, the student will be prepared to do the accounting necessary for a small business organization; i.e., keep a complete set of books, draw up statements at the end of the fiscal period, adjust accounts for accruals, deferred items, depreciation, and close the books.

United States Department of Agriculture Graduate School

PRINCIPLES OF ACCOUNTING—SECOND HALF (6–352B)

Three credits, one semester.

This is a continuation of the first half, covering more advanced principles of accounting, such as accounting for partnerships, corporations, and manufacturing, and depreciation policies and analysis of financial statements.

Prerequisite: Principles of Accounting First Half or equivalent.

United States Department of Agriculture Graduate School

PRINCIPLES OF ACCOUNTING I (ACCT 111, ACCT 112, ACCT 113)

Four credits, one quarter each.

ACCT 111 This course is designed to study the fundamental concepts of the accounting cycle and problems related to the textbook material; analyze and journalize realistic business transactions, post these journal entries to ledgers and record the resulting trial balance for a single proprietorship. Emphasis is placed on the worksheet, the preparation of financial statements, closing entries and the post-subsidiary ledgers, classified financial statements and accounting for payroll taxes.

Prerequisite: Three quarters of accounting, business management and computer science majors.

ACCT 112 The course is designed to study accounting procedures as they relate to partnerships; (Other areas covered will) including the requirements for internal control of assets, accounting for sales and sales tax, and the procedures required for departmentalizing income statements. Attention is given to accounting for payables, receivables and their valuation, inventories, fixed assets and their depreciation, and property taxes. The need for the "matching process" is emphasized, along with procedures for home office and branch office accounting and the financial statements required.

Prerequisite: ACCT 111.

ACCT 113 The students will study the characteristic of corporate accounting as it applies to the formation of a corporation, incorporating a proprietorship or partnership, issuing capital stock and other corporate transactions. Accounting problems solved will relate earnings and dividends, long-term liabilities and investments, manufacturing accounts and the manufacturing worksheet. Applying the principles of process and job order cost accounting to problems designed for the required training in the cost area. Other areas covered will include budgeting, statement analysis, income taxes, the flow of funds and the automation of accounting procedures. 3 hours lecture, 2 hours laboratory.

Prerequisite: ACCT 112.

Washington Technical Institute

INTERMEDIATE ACCOUNTING—FIRST HALF (6–353A)

Three credits, one semester.

This course does not cover the actual keeping of a system of accounts, but independent evaluation of existing accounts for conformance with sound valuation and accounting principles. Also, methods of correcting unsound account practices, alternative methods of presentation on financial statements, evaluation of asset and liability valuation and statement presentation principles in the following areas: Cash, receivables, inventories, current liabilities, and investment accounts, including bonds, stocks, and special funds.

Prerequisites: Principles of Accounting, or equivalent.

United States Department of Agriculture Graduate School

INTERMEDIATE ACCOUNTING I (BUSI 201)

Three credits, one semester.

This course will cover the valuation and amortization problems of current needs, long-term investments, tangible fixed assets, intangible assets, and deferred charges; accounting for current, non-current, contingent, and estimated liabilities; also, net income concepts and the correction of prior year's earnings.

Prerequisite: BUSI 103 and BUSI 104.

Prince George's Community College

INTERMEDIATE ACCOUNTING I (ACCT 221)

Three credits, one quarter.

The student will study financial statements, concentrating on the measurement of business income and the form and content of the income statement and the balance sheet. An examination of cash receipts and disbursements is made for purposes of reconciling and budgeting the asset. Other areas studied include the valuation and pledging of receivables, the costing and valuation of inventories, and the different types of investments—temporary and long term.

Prerequisite: ACCT 113.

Washington Technical Institute

INTERMEDIATE ACCOUNTING I, II, III (BA 301, 302, 303)

Four credits, one quarter each course.

This is a three-quarter course taken in the sequence of Intermediate Accounting I, II, and III. The first quarter has a brief review of the balance sheet and the income statement followed by study of cash flow, income and expense matching, receivables and liabilities. The second course will asset valuation, cost allocation, and corporation equities. The third course continues with problems of corporation accounting, retained earnings, dividends, bonds, investments and the analysis and interpretation of accounting data.

Federal City College

INTERMEDIATE ACCOUNTING I—THEORY AND PRACTICE (A–103)

Three credits, one trimester.

This course deals with the application of accounting principles to financial statement preparation with emphasis on procedure and presentation. Particular attention is given to cash, accounts receivable, and the principles and concepts of inventory valuation.

Prerequisite: A–102.

Southeastern University

INTERMEDIATE ACCOUNTING I, II, III (ACCT 221, 222, (223)

Four credits, one quarter each.

This course will cover extensive analysis of the principal elements of accounting systems and statements.

Prerequisite: ACCT 111, 112, 113 or ACCT 211, 212, 213.

Northern Virginia Community College

INTERMEDIATE ACCOUNTING II (BUSI 202)

Three credit hours, one semester.

Course covers accounting for the business organization, financing, operations and dissolution of corporations and partnerships; basic principles of consignment and installment sales.

Prerequisite: BUSI 201.

Prince George's Community College

INTERMEDIATE ACCOUNTING—SECOND HALF (6–353B)

Three credit hours, one semester.

This is a continuation of valuation and statement presentation principles in the following areas: (1) plant and equipment, its acquisition and retirement; depreciation and depletion; revaluations; (2) intangibles; (3) long-term liabilities; (4) paid in capital—upon corporate formulation and subsequent changes; (5) retained earnings—free for divident distribution and appropriations and preparation of statements form incomplete records. The following will also be covered: errors and their correction, analysis of financial statements, source and application of funds statements, cash flow, and financial statements adjusted for price-level changes.

Prerequisite: Intermediate Accounting, first half.

United States Department of Agriculture Graduate School

INTERMEDIATE ACCOUNTING II (ACCT 222)

Three credits, one quarter.

The student will study the accounting requirements related to plant and equipment with attention directed to methods of depreciation, retirement, repair and maintenance, and revaluation. Study will also include intangible assets and liabilities-current, estimated and contingent; study bonds with attention given to accounting procedures, retirements, refunding, conversions and serial redemption; capital stock with emphasis on issuance, dividends, warrants, options, redemtion and treasure stock; and the flow of funds determined by the worksheet and displayed by an appropriate statement.

Prerequisite: ACCT 221.

Washington Technical Institute

INTERMEDIATE ACCOUNTING II—THEORY AND PRACTICE (A-104)

Three credits, one trimester.

Special consideration is devoted to technique and theory of accounting principles as applied to specialized areas as consignments, income statements, types of interest, etc. Detailed analysis will be maintained of each balance sheet account.

Prerequisite: A–103.

Southeastern University

INTERMEDIATE ACCOUNTING—SECOND HALF (6–353B)

Three credits, one semester.

This is a continuation of valuation and statement presentation principles in the following areas: (1) plant and equipment, its acquisition and retirement; depreciation and depletion; revaluations; (2) intangibles; (3) long-term liabilities; (4) paid in capital—upon corporate formulation and subsequent changes; (5) retained earnings—free for dividend distribution and appropriated, and preparation of statements from incomplete records. The following will also be covered: errors and their correction, analysis of financial statements, source and application of funds statements, cash flow and financial statements adjusted for price-level changes.

Prerequisite: Intermediate Accounting (First Half) or equivalent.

United States Department of Agriculture Graduate School

INTERMEDIATE ACCOUNTING I, II, III (BA 301, 302, 303)

Four credits, one quarter each.

This is a three-quarter course taken in the sequence of Intermediate Accounting I, II, and III. The first quarter is a brief review of the balance sheet and the income statement followed by study of cash flow, income and expense matching, receivables and liabilities. The second course will asset valuation, cost allocation, and corporation equities. The third course continues with problems of corporation accounting, retained earnings, dividends, bonds, investments and the analysis and interpretation of accounting data.

Federal City College

INTERMEDIATE ACCOUNTING III (ACCT 223)

Three credits, one quarter.

The student will study partnership accounting as it relates to the formulation of a partnership, distribution of profit and loss, admission of a new partner, withdrawal of a partner, and liquidation of a partnership. Accounting procedures for sales will be studied as they relate to installments and consignments. Also, the accounting required for consolidated statements with attention given to the balance sheet at acquisition and the balance sheet after acquisition, inter-company accounts, the income statement and the worksheet. A continued study will be directed to insurance protection accounting, deferred income taxes and fiduciary accounting.

Prerequisite: ACCT 222.

Washington Technical Institute

ADVANCED ACCOUNTING I, II—THEORY AND PRACTICE (A–203, 204)

Three credits, one trimester each.

A–203 Consideration of major accounting problems which may arise in connection with partnerships, estates and trusts, insurance and municipalities. This course is designed for those who will enter the accounting profession.

Prerequisite: A–104.

A–204 This course will cover major accounting problems which arise in connection with consolidated financial statements. Full consideration is given to corporate financing and foreign exchange with emphasis on the managerial aspects.

Prerequisite: A–203.

Southeastern University

ADVANCED ACCOUNTING (COMM 12)

Three credits, one semester.

This course will cover balance sheet liability and net worth profit analysis.

Prerequisite: COMM 2, Elementary Accounting.

University of Virginia School of General Studies

COST ACCOUNTING I, II (A–201, 202)

Three credits, one trimester each.

A–201 This course is designed to treat both accounting and managerial aspects in cost concepts. The course also includes job orders, process cost systems; flexible budgets; joint by-product costs; break-even points; differential costs, etc.

Prerequisite: A–103.

A–202 A study of the cost accounting principles and procedures with special emphasis placed on the problems of cost analysis and control. Each topic is approached in view of what management may expect and the use to which cost information may be put.

Prerequisite: A–201.

Southeastern University

COST ACCOUNTING I, II (ACCT 234, 235)

Three credits, one quarter each.

Studies in accounting systems, methods and statements involved in process and job cost accounting; and the use of standards and cost controls will be exercised in this course.

Prerequisite: ACCT 111, 112, 113 or ACCT 211, 212, 213.

Northern Virginia Community College

COST ACCOUNTING I (ACCT 227, II, 228)

Three credits, one quarter each.

ACCT 227 The student will study the job order cost cycle and the flow of cost. Special attention is given to direct materials purchasing, storing and issuing, and inventory procedure. Participants will study direct labor as the accounting procedures relate to time-keeping, payroll and the charging of direct labor to production. Also studied will be the application of overhead—indirect materials, indirect labor and other expenses—and the accounting procedures concerned with the departmentalizing, and application thereof.

Prerequisite: ACCT 221.

ACCT 228 The student will study the general procedures in process cost accounting. Emphasis is placed on production data and cost flow, beginning inventory of work in process—average costing, units lost or increased in production, FIFO costing of work in process, accounting for by-products, and accounting for joint products. Also studied will be budgetary control, the planning budget, the flexible budget, manufacturing cost standards for materials, labor and overhead, cost analysis for managerial decisions, direct costing and automation.

Prerequisite: ACCT 227.

Washington Technical Institute

FEDERAL GOVERNMENT ACCOUNTING (6–264)

Two credits, each semester.

First semester: Study and application of basic principles and practices of accounting in Federal agencies; concepts and methods of fund control systems; practice with basic record-obligation control, cash disbursement, object class, general ledgers, and cost ledgers; accounting for funding processes-appropriation, apportionment, allotment, obligation, disbursement, reimbursement; transfer appropriation accounts-consolidated working fund advances and the elementary principles of accrual accounting. Second semester: Inventory and property accounting; reimbursable operations financed by revolving funds, advanced principles of accrual accounting; reporting of accrued expenditures (Form BA–6727) and accrued revenues (Form BA 66728); preparation of financial reports—SF–133, SF–233, SF–225, SF–220, 221, 222, BA–R 2108 (Sec. 1311 report); accounting in decentralized operation; accrued cost accounting for areas of program responsibility—relationship to cost-based budgeting—support for planning-programming-budgeting system; year-end closing, accounting for lapsed appropriations; and transfers and restorations to successor "M" accounts.

Prerequisites: Principles of Accounting or equivalent.

United States Department of Agriculture Graduate School

REVIEW FOR GS–510 ACCOUNTING EXAMINATION (6–46)

Non-credit, eight weeks.

This course is designed to review and prepare for examination for GS 5–7 and GS 9–12 grades in the 510, Professional Accountant series. Presentation includes background and simulated problems and questions from GS–510 examinations on all accounting subjects. The same examination is given to both groups with a lesser average required of the GS 5–7 group. The Civil Service Commission gives this examination every month; and the student will be prepared to take the examination at the conclusion of either of the 8-week periods.

Eligibility: Non-competitive examination—GS–510 accounting position: The student is eligible if his accounting Officer makes the request through his agency personnel office and if the personnel office is agreeable.

Minimum prerequisite: Principles of Accounting or equivalent.

Competitive examination: The student should either not be employed in a GS–510 accounting position or be employed outside the Federal Government.

Prerequisites: (1) 24 semester hours in accounting and auditing required: (2) three years of progressive experience providing knowledge and skills equivalent to those acquired in four years of academic study with accounting major; (3) any time-equivalent of (1) and (2).

United States Department of Agriculture Graduate School

COST ACCOUNTING AND BUDGETING CONTROLS I, II (BA 312, 313)

Four credits, one quarter each.

These courses cover accounting for manufacturing cost including job order cost, continuous process costs and standard cost and the application of various inventory costing systems. The study includes the solution of a practice set of cost accounting transactions and records, and principles of budgeting for managerial use in profit planning and control. This is a two-course sequence to be taken in successive quarters.

Federal City College

COST ACCOUNTING (BUSI 203)

Three credits, one semester.

This course covers the basic concept of the cost accounting function within a manufacturing organization, material costs, labor costs, manufacturing overhead, and marketing costs that enter the cost accounting system.

Prerequisite: BUSI 103–104.

Prince George's Community College

COST ACCOUNTING (BA 350)

Four credits, one quarter.

This course is designed for non-accounting majors to provide some knowledge of cost accounting systems and how to use cost data for management decisions. It is an elementary course based upon a project of factory cost accounting for a manufacturing company. It also covers principles of cost accounting, job cost systems, process cost systems, standard cost systems, budgeting and management uses of cost data.

Federal City College

GOVERNMENT ACCOUNTING (BA 353)

Four credits, one quarter.

This course studies fund account for governmental entries including appropriations, encumbraces, and fund transfer. Special attention is given to the Federal Government including the planning, programming, and budgeting cycle and agency accounting as well as municipal budgeting and accounting.

Federal City College

AUDITING (ACCT 229)

Three credits, one quarter.

Purposes of audit, relationships of auditor and client, kinds of audit working papers, internal controls and examination of accounting systems, and audit reports will be items of interesting learning.

Prerequisite: ACCT 111–112–113 or ACCT 211–212–213.

Northern Virginia Community College

PRINCIPLES OF AUDITING (6–601)

Three credits, one semester.

This course covers principles and practices involved in audits, with emphasis on governmental auditing. It also involves consideration of purposes and types of audits; auditing concepts and standards; planning and performing audits; review of internal controls, preparation of work papers, and report writing; and utilization of audit principles in auditing operations of agencies in Federal Government.

Prerequisite: Intermediate Accounting or equivalent.

United States Department of Agriculture Graduate School

ELEMENTARY AUDITING (COMM 21)

Three credits, one semester.

This course will include basic auditing principles.

Prerequisites: Comm 11, Intermediate Accounting
Comm 12, Advanced Accounting

University of Virginia

AUDITING I (BA 411)

Four credits, one quarter.

This course is a study of generally accepted auditing procedures and practice, a review of internal control systems, procedures for audit verification of accounts and financial statements, preparation of auditing working papers and audit reports. An audit practice case will be worked by the student.

Federal City College

AUDITING II (BA 412)

Four credits, one quarter.

This course provides an advanced study of contemporary auditing practice and theory, consideration of advanced problems in auditing and financial statement presentation, audit sampling and auditing computerized accounting systems.

Federal City College

AUDITING I, II—THEORY AND PRACTICE (A-205, 206)

Three credits, one trimester each.

A-205 This course develops the theory of auditing supported case method through these approaches; how to begin an audit; process of the audit; termination; how to proceed after the audit.

Prerequisite: A-104.

A-206 The course stresses the preparation of the auditor's report through the use of advanced auditing procedures, practices and reports, and reveals the professional and ethical standards of public practice.

Prerequisite: A-205.

Southeastern University

TAXATION I, II (A-207, 208)

Three credits, one trimester each.

A-207 A course in Federal and State taxations which will outline the practical application of the Internal Revenue Code as it affects tax returns. Special background attention is provided in history of taxation, inception of law, credits and exemptions, with supervised practice preparation of various forms.

Prerequisite: A-101.

A-208 Taxation II is a continuation of the fundamental course. The course deals with the more involved problems of income determination; reorganizations; personal holding companies; aliens; foreign corporations; foreign taxes; social security taxes; estate tax; gift tax; administrative procedure in connection with additional assessments and claims for refunds.

Prerequisite: A-207.

Southeastern University

AEROSPACE

AIRFRAME STRUCTURES I, II, III (AERO 101, 102, 103)

Five credits, one quarter each.

AERO 101	The student will study and perform occupational type tasks in wood, fabric and finishing work.
AERO 102	The student will study and perform occupational type tasks in welding and sheetmetal work.
AERO 103	The student will study and perform occupational type tasks in airframe and assembly operations.

Washington Technical Institute

AIRFRAME SYSTEMS (AERO 106)

Seven credits, one quarter.

The student will study and perform occupational type tasks relating to electrical, fuel and pressure systems. 3 hours lecture, 12 hours laboratory.

Washington Technical Institute

FEDERAL AIR REGULATIONS (AERO 120)

Four credits, one quarter.

The student will make a detailed study of the Federal Air regulations to become familiar with specific rules and regulations applying to the field of airframe and powerplant technology.

Washington Technical Institute

AIRFRAME SEMINAR (AERO 199)

Seven credits, one quarter.

The student will select an appropriate airframe area and engage in advanced study. 3 hours lecture, 12 hours laboratory.

Prerequisite: Completion of AERO 103.

Washington Technical Institute

POWERPLANT I, II, III (AERO 211, 212, 213)

Eight credits, one quarter.

AERO 211	The student will make a theoretical study of powerplants and powerplant systems. Practical training

will be provided in powerplant inspection, maintenance, overhaul and related tasks on engine components.

Seven credits, one quarter.

AERO 212	The student will study light aircraft powerplants, component parts and systems in various configurations and perform occupational type tasks.

Eight credits, one quarter.

AERO 213	The student will study heavy aircraft powerplants, component parts and systems in various configurations, and perform occupational type tasks.

Washington Technical Institute

AIRFRAME AND POWERPLANT SEMINAR (AERO 299)

Fourteen credits, one quarter.

Each student will review previous learning experiences and select for advanced study a special interest area to become proficient in specialized occupational tasks.

Washington Technical Institute

ARCHITECTURE

HISTORY OF ARCHITECTURE (AR 109)

Three credits, one semester.

The evolution of building development and the chronological history of architectural construction, covering subjects from primitive to modern construction will be covered. Also included will be an analysis of architectural expression as an outgrowth of the geographical and climatic conditions of the locale as well as the sociological influences and technical achievements of the historical period; introduction and the science of architecture; prehistoric and Tigris-Euphrates Valley civilizations; Egyptian, Greek and Roman architecture and their structural evolution; Early Christian, Byzantine, and Romanesque architecture; Islamic architecture; Gothic architecture; renaissance architecture; revivals, eclecticism, and beaux arts; and contemporary architecture.

Montgomery College

HISTORY OF ARCHITECTURE I, II (ARCH 204, 205)

Three credits, one quarter each.

Covered in this course will be the history of architecture from ancient times to the present but with emphasis on the shapes and forms of twentieth century developments.

Northern Virginia Community College

INTRODUCTION TO ARCHITECTURAL TECHNOLOGY (ARCH 100)

Two credits, one quarter.

This is an intensive course outlining the history and impact of architecture. Emphasis on the dynamics and social aspects of architecture and society.

Northern Virginia Community College

PRINCIPLES AND THEORY OF ARCHITECTURE (ARCH 100)

Three credits, one quarter.

The student will study the basic observations in architecture, architectural history, and master architects. Emphasis will be placed on the dynamics and social aspects of architecture and society.

Washington Technical Institute

ARCHITECTURAL DRAWING I, II, III (ARCH 101, 102, 103)

3 credits, one quarter each.

ARCH 101	The student will be introduced to the fundamentals of architectural drawing which include lettering, use of drawing instruments, basic technical drawing, isometric and oblique pictorial drawings, freehand sketching and drafting expression.
ARCH 102	The student will continue the study of architectural drawing including assembly drawings, drafting expression and typical architectural details. Prerequisite: ARCH 101.
ARCH 103	The student will design and prepare a complete set of working drawings for a residential type building. Area of study will include area planning site (site plan), basic architectural plans (floor plans), presentation architectural plans (elevations), and creative architectural drafting and design. Prerequisite: ARCH 102.

Washington Technical Institute

ARCHITECTURAL DRAWING I (ES 181)

Two credits, one semester.

This is an introductory course in general drafting technique. It covers orientation and use of instruments; architectural and engineering lettering; geometric construction; orthographic projections, points, lines and planes; dimensioning, scales, and materials symbols; sections and cutting planes; auxiliary views; pictorial drawings-isometric, oblique, and perspective; architectural application of basic concepts; and freehand sketching of the various types of drawing.

Montgomery College

ARCHITECTURAL DRAWING (ES 205)

Two credits, one semester.

This is a course in the principles of architectural drawing, architectural details, structural and heating details, preliminary and working drawing and site planning. Specifications, building materials, typical house construction methods, and material estimating. It also provides experience in planning from the standpoint of standard materials, building regulations, safety, utilities, and material costs.

Prerequisite: ES 102 or equivalent.

Montgomery College

ARCHITECTURAL DRAWING II (ES 182)

Three credits, one semester.

This is the second in a series of four drawing courses; an introduction to systems of construction, with exposure to wood, steel and concrete structural systems. It is also a broad survey of the materials used in the construction of buildings particularly as they apply to the structural systems. Materials and their uses include: wood, concrete, masonry, metal, working drawings and details for various structural systems; graphic methods for materials, uses and limitations of materials. A strong emphasis on the working drawing requirements of the structural engineer's office is also covered.

Prerequisite: ES 181.

Montgomery College

ARCHITECTURAL DRAWING IV, V, VI (ARCH 201, 202, 203)

Three credits, one quarter each.

ARCH 201	The student will prepare preliminary drawings and presentation for a small commercial building from sketches with an economic analysis and a model. Prerequisite: ARCH 103.
ARCH 202	The student will prepare working drawing and a detailed architectural and structural phase including a site plan from approved preliminary drawings and presentation. Prerequisite: ARCH 201.
ARCH 203	The student will continue Architectural Drawing V, completing a set of working drawings through preparation of mechanical and electrical drawings for final submission. Prerequisite: ARCH 202.

Washington Technical Institute

ARCHITECTURAL DRAFTING I, II, III (ARCH 111, 112, 113)

Three credits, one quarter each.

ARCH 111 This course is designed to provide the fundamental knowledge of the principles of drafting. Also included are skills and techniques of drafting including use of drafting equipment, lettering, free-hand orthographic and pictorial sketching, geometric construction, and orthographic instrument drawing of principle views; projection problems dealing with principles of descriptive geometry involving points, lines, planes and connectors; and the principles of isometric, oblique and perspective drawings.

ARCH 112 This course provides a development of techniques in architectural lettering, symbols, and interpretation; dimensioning, freehand and instrument drafting; drawing of construction details, using appropriate material symbols and connections; sections, scale details and full-size details prepared from preliminary sketches; and applications of descriptive geometry in visualization and analytic solutions of drafting problems involving auxiliary views, intersections and developments.

Prerequisite: ARCH 111 or equivalent.

ARCH 113 This is an approach in depth to the study of architectural drafting; the development of techniques in architectural lettering, dimensioning, freehand sketching and instrument drawing. It also includes drawings of construction details, using appropriate material symbols and connections, and working drawings, including plans, elevations, sections scale details and full-size details prepared from preliminary sketches.

Prerequisite: ARCH 112.

Northern Virginia Community College

ARCHITECTURAL DRAFTING IV, V, VI (211, 212, 213)

Three credits, one quarter each.

ARCH 211 This course will include the drawing of structural plans and details as prepared for building construction including steel, concrete, and timber structural components; also appropriate details and drawings necessary for construction and fabrication of structural members; and reference materials providing skills and knowledge in locating data and in using handbooks.

Prerequisite: ARCH 113.

ARCH 212 This course covers the drawing of plans and details as prepared for mechanical equipment such as air conditioning, plumbing and electrical systems using appropriate symbols and connections, and coordination of mechanical and electrical features with structural and architectural components.

Prerequisite: ARCH 211.

ARCH 213 This course provides for the preparation of a complete set of working drawings for the architectural structure; preparation of mill work drawings, cabinets and built-in-equipment detail; and final assembly of the complete document for construction purposes.

Prerequisite: ARCH 212.

Northern Virginia Community College

STRUCTURAL DRAWING I (ARCH 116)

Three credits, one quarter.

The student will become familiar with the material and construction drafting technology for frame construction, buildings and fireproof building (wood and masonry). The preparation of working drawings (structural phase) is also introduced.

Washington Technical Institute

ARCHITECTURAL RENDERING I (ARCH 126)

Three credits, one quarter.

The student will learn the principles of graphic representation with emphasis on the development of the methods of projection, perspective, and the delineation of shapes and shadows of architectural form.

Washington Technical Institute

BUILDING EQUIPMENT I (ARCH 136)

Three credits, one quarter.

The student will study heating, air conditioning, and plumbing systems according to fundamental principles, accompanied by designs and layouts for small buildings.

Washington Technical Institute

CONSTRUCTION MATERIALS AND METHODS (ARCH 216)

Three credits, one quarter.

The student will concentrate on the properties of wood, steel and reinforced concrete. He will study stress in beams, columns and trusses; laboratory methods of testing wood, steel and concrete; make and test concrete cylinders in testing laboratory, and analyze the test results.

Prerequisite: ARCH 116.

Washington Technical Institute

STRUCTURAL DRAWING II (ARCH 217)

Three credits, one quarter.

The student will learn material and construction drafting technology for steel and concrete structure. The preparation of working drawings will be continued.

Prerequisite: ARCH 116.

Washington Technical Institute

ARCHITECTURAL RENDERING II (ARCH 226)

Three credits, one quarter.

The student will continue the course of Architectural Rendering I with emphasis on the principles, methods, and media used in architectural presentation.

Prerequisite: ARCH 126.

Washington Technical Institute

BUILDING EQUIPMENT II (ARCH 236)

Three credits, one quarter.

The student will make a study of illumination, acoustics, service equipment and electrical distribution evaluated on fundamental principles, accompanied by design and layouts for small buildings.

Prerequisite: ARCH 136.

Washington Technical Institute

BUILDING MECHANICAL EQUIPMENT (ARCH 237)

Three credits, one quarter.

This is a general study of heating, air conditioning, plumbing and electrical equipment, materials and symbols. Also included are building code requirements pertaining to residential and commercial structures; reading and interpretation of working drawings by mechanical engineers; and coordination of mechanical and electrical features with structural and architectural designs.

Northern Virginia Community College

FIELD INSPECTIONS (ARCH 240)

Three credits, one quarter.

This course provides working knowledge of methods and procedures of building construction inspection and technical reporting on the project site.

Northern Virginia Community College

MATERIALS AND METHODS OF CONSTRUCTION I (ARCH 141)

Three credits, one quarter.

This course is designed to introduce the materials used in creation of structures, the physical properties and the architecture and characteristics of steel, concrete, timber, glass, related materials and the methods used in testing materials.

Prerequisite: ARCH 100 or ENGR 100.

Northern Virginia Community College

MATERIALS AND METHODS OF CONSTRUCTION II (ARCH 142)

Three credits, one quarter.

This course is designed to introduce the practical use of materials and methods of structures. The architectural and structional relationship of concrete, steel, and timber structures are analyzed with an introduction to cost analysis and the economic aspect involved in construction, are also studied.

Prerequisite: ARCH 141.

Northern Virginia Community College

BUILDING CODES AND CONTRACT DOCUMENTS (ARCH 277)

Three credits, one quarter.

This is a study of building codes and their effect in relation to specifications and drawings. The purpose and writing of specifications will be studied along with the legal and practical application to working drawings. Contract documents will be analyzed and studied for the purpose of client-architect-contractor responsibilities, duties and mutual protection.

Northern Virginia Community College

BUILDING ELECTRIC EQUIPMENT (ARCH 236)

Three credits, one quarter.

This is a study of equipment, materials, and symbols. Also included are building code requirements pertaining to residential and commercial construction reading and interpretation of working drawings by electrical engineers; and coordination of electrical structures with architectural and structural design.

Northern Virginia Community College

AUTOMATIC DATA PROCESSING

INTRODUCTION TO DATA PROCESSING (DP–010)

Non-credit, one semester.

Evening classes. The student will learn basic fundamental skills in data processing.

Prince George's County Public Schools

INTRODUCTION TO DATA PROCESSING (ED 685)

Non-credit, one semester.

This course is a basic orientation to automation. It will include the history of automation, basic concepts, and principles of unit record equipment and computers.

Fairfax County Public Schools

INTRODUCTION TO DATA PROCESSING (DAPR 100)

Four credits, one quarter.

This is an introduction course to methods, techniques, and systems of manual, mechanical, electronic and automatic data processing.

Prerequisite: One year of high school algebra.

Northern Virginia Community College

INTRODUCTION TO AUTOMATIC DATA PROCESSING

Non-credit, one semester.

This is an introductory course in automatic data processing designed for those persons with no previous experience in this field. Included in the material to be presented are: The History and Development of Data Processing, the Fundamentals of Punched Card Data Processing (sorter, card punch, printer, etc.), Introduction to ADP Arithmetic, the Fundamentals of Electronic Data Processing (Tape systems, flow charts, etc.), and Computer Applications.

Washington Saturday College

INTRODUCTION TO PUNCH CARD DATA PROCESSING (DP-020)

Non-credit, one semester.

Evening classes. The student will learn the basics of punch card data processing.

Prince George's County Public Schools

MATH FOR DATA PROCESSING (DP-015)

Non-credit, one semester.

Evening classes. The student will be taught math as related to data processing.

Prince George's County Public Schools

PRINCIPLES OF DATA PROCESSING (DAPR 106)

Three credits, one quarter.

This is an introduction to methods, techniques, and systems of manual, mechanical, and electronic data processing. History and development of punch card data processing, and electronic or automatic data processing will be included.

Prerequisite: One year of high school algebra.

Northern Virginia Community College

PRINCIPLES OF DATA PROCESSING (BC101)

Four credits, one quarter.

The purpose of the course is to provide the beginning student with a basic yet comprehensive introduction to the field of business data processing; basic elements of processing; data by mutual and mechanical means; punch card unit records; types of punched card processing equipment and uses; computing systems and their components, and introduction to flowcharting and computer programing languages.

Federal City College

ADP FOR MANAGERS (ED 695)

Non-credit, one semester.

An introductory course designed to give supervisors a general understanding of data processing and data processing application.

Fairfax County Public Schools

BASIC CONCEPTS OF DATA PROCESSING (4–105)

Three credits, one semester.

This course is designed to introduce data processing to the student entirely new to the field. Examination of areas of undertaking will be required by non-professionals or those interested in programming instruction, but without background experience.

United States Department of Agriculture Graduate School

BASIC DATA PROCESSING PRINCIPLES (DAPR 10)

Three credits, one quarter.

This course is an introduction to the principles of manual, mechanical, and electronic data processing. Basic terminology and concepts of data processing with emphasis placed on understanding the role and functions of computers in modern society.

Northern Virginia Community College

BUSINESS DATA PROCESSING (COMM E15)

Three credits, one semester.

This is an introductory course in automatic data processing for business. This course will include a description of unit record and electronic data processing equipment.

University of Virginia School of General Studies

BUSINESS DATA PROCESSING SYSTEMS (CS 236)

Three credits, one semester.

Exploration of the nature of systems work will include studies, analysis, design, implementation, and evaluation. Introduction to the tools and techniques will be used to carry out systems work, and their use in practical problems. A system study, using the course material, is expected of each student.

Prerequisite: CS 120 or consent of instructor.

Montgomery College

DATA APPLICATIONS AND ANALYSIS (CS 105)

Three credits, one semester.

Practical, "work-a-day" data reports specifically related to mechanical, electromechanical, and electronic data processing equipment. Stress is on sources, uses, interpretations and analyses of summary reports for payroll, sales, accounts receivable, accounts payable, inventory, production, and other information reports.

Prerequisites: AC 200, AC 201, or ST 203; BA 103; and CS 100 or CS 101.

Montgomery College

DATA PROCESSING

Non-credit, one semester.

This is an introductory course in basic data processing techniques.

District of Columbia Public Schools

DATA PROCESSING AND COMPUTER OPERATIONS

Non-credit, one semester.

This course is open to all adult residents of Washington, D.C.

District of Columbia Public Schools

DATA PROCESSING FUNDAMENTALS (CS 100)

Two credits, one semester.

This course is a general introduction in data processing. The principal areas covered are electro-mechanical (EAM) and electronic computer processing, with emphasis on concepts as well as practical applications.

Montgomery College

DATA PROCESSING I (EDPM 100)

Three credits, one quarter.

The student will learn to identify computer equipment and functions and to do flowcharting, perform arithmetic operations with various numbering systems and identify instruction formats used in the computer.

Washington Technical Institute

DATA PROCESSING MANAGEMENT (DAPR 236)

Three credits, one quarter.

Survey of ADP management, covering staff and operating functions will be studied along with ADPE planning, analysis of requirements, system selection, contractual consideration, lease/purchase studies, costing of tangible and intangible benefits are included.

Prerequisite: DAPR 106 or equivalent.

Northern Virginia Community College

FUNDAMENTALS OF DATA PROCESSING (DAPR 153)

Four credits, one semester.

The development of the functions and techniques of data processing, including the related subjects of numbering systems and number conversion, punch card systems, flowcharting, and an introduction to computer programming, stored program concepts, and the components and functions of computer systems will be considered in this course.

Prince George's Community College

BIOLOGY AND LIFE SCIENCES

INTRODUCTION TO BIOLOGY (BIOL 1, 2)

Four credits, one semester each.

This is a lecture and laboratory course.

Prerequisite: BIOL 1.

This is also a lecture and laboratory course.

University of Virginia School of General Studies

INTRODUCTORY BIOLOGY

Non-credit, one semester.

This is a survey of biological principles; emphasis is on man as a functional organism in his environment, which includes application of biology to the problems of health, ecology, and pollution. The objective is to acquaint the student with the field of biology and to show how biology impacts the everyday life of American society.

Washington Saturday College

BIOLOGICAL SCIENCE I (NB 101)

Four credits, one quarter.

This course introduces the concepts of modern biological principles. Emphasis placed on the physical and chemical basis of life processes.

Prerequisites: None

Federal City College

INTRODUCTION TO MODERN BIOLOGY (1-115)

Two credits, one semester.

This is an elementary course at college level for those desiring general knowledge.

United States Department of Agriculture Graduate School

BIOLOGY (BIOL 06)

Five credits, one quarter.

This is a foundation course in general biology designed to develop a basic understanding of plant and animal life. Students may re-register for this course in subsequent quarters as necessary until the course objectives are completed.

Northern Virginia Community College

GENERAL BIOLOGY (BI 101)

Four credits, one semester.

This course introduces the basic principles governing living organisms with emphasis on the molecular and cellular basis of life. Not open to those students with credit in BI 111 or BI 121.

Montgomery College

GENERAL BIOLOGY I, II, III (BIOL 101, 102, 103)

Four credits, one quarter each.

Fundamental characteristics of living matter, from the molecular level to the ecological community with emphasis on general biological principles are included in this course.

Northern Virginia Community College

GENERAL BIOLOGY I (BIOL 101)

Four credits, one semester.

The cell and its fundamental processes, tissues, microorganisms, anatomy and physiology of a vertebrate, development, and the principles of genetics are studied.

Prince George's Community College

GENERAL BIOLOGY (BI 102)

Four credits, one semester.

This is a survey of the plant and animal kingdoms; topics include evolution, adaptation and ecology. This course is not open to those students with credit in BI 111 (Botany I) or BI 121 (Zoology I).

Prerequisite: BIOL 101.

Montgomery College

GENERAL BIOLOGY II (BIOL 102)

Four credits, one semester.

A representative of each of the major phyla of plants and animals, including its taxonomy, structure, functions, adaptation to environment, and evolution are studied.

Prerequisite: BIOL 101. Laboratory Fee: $10.

Prince George's Community College

BOTANY (BIOL 125)

Four credits, one quarter.

The student will demonstrate an understanding of the fundamental concepts of the scientific method through a study of life ranging from the cell as a living unit to the more complex plant life. Through inquiry and investigation, the student will familiarize himself with and interpret basic concepts applicable to plant life which include cellular function, development, structure as related to function, diversity of type as related to common pattern, evolution, and interrelationship of organisms and their total relationship to the environment.

The student will perform laboratory experiments enabling him to understand botanical concepts learning and applying certain biological laboratory techniques.

Washington Technical Institute

GENERAL BOTANY (NB 203)

Four credits, one quarter.

This course will survey morphology, distribution; reproduction, and physiology of selected representatives of major plant groups.

Prerequisites: Biological Science I, II, III.

Federal City College

BOTANY I, II (BI 111, 112)

Four credits, one semester each.

BI 111 Emphasis is placed on the fundamental biological principles, with special attention to morphology and physiology of the flowering plant. A synopsis of various plant groups will be included.

BI 112 This course will contain a brief evolutionary study of algae, fungi, liverworts, mosses, ferns and their allies, and the seed plants. Emphasis is placed on the morphology, reproduction, ecology and economic importance of selected plants.

Prerequisite: Four hours of biological science.

Montgomery College

BASIC BIOLOGICAL TECHNIQUES (NB 304)

Four credits, one quarter.

This course is an introduction to laboratory procedures used in industrial and medical research.

Federal City College

MICROBIOLOGY (BIOL 201)

Four credits, one semester.

The morphology and metabolism of microorganisms including the sources and nature of infection, sterilization, immunity and control of pathogenic organisms; bacteria, viruses, rickettsiae, yeasts, fungi and protozoa are studied. Culture methods, staining, and identification procedures for microogranisms will be included.

Prerequisite: ANTH 103.

Prince George's Community College

MICROBIOLOGY (BI 203)

Four credits, one semester.

This course will include morphology, physiology, and classification of bacteria and, to some extent, yeasts and molds; fundamental laboratory techniques and culture methods; and basic aspects of microbiology in relation to man and his environment.

Prerequisite: 4 semester hours of chemistry and four semester hours of a biological science.

Montgomery College

MICROBIOLOGY (BIOL 268)

Six credits, one quarter.

An introduction to microbiology, morphology and activities of microorganisms; control of microorganisms; infection, immunity and other antibody reaction; study of infections and infectious diseases will be studied in this course.

Prerequisite: BIOL 103 and one year of college chemistry.

Northern Virginia Community College

SANITATION-BACTERIOLOGY (BIOL 266)

Three credits, one quarter.

The basis of this course is the moral and legal responsibilities involved in assuring sanitary conditions in the Food Service Establishment. Emphasis is on the causes and prevention of food poisoning.

Prerequisite: High School General Science or Biology or Chemistry.

Northern Virginia Community College

HUMAN BIOLOGY (BI 105)

Four credits, one semester.

This course is an introduction to human anatomy through a study of all organ systems. Appropriate specimens are utilized in the laboratory.

Prerequisite: Acceptance in the Nursing Curriculum or permission of the instructor.

Montgomery College

ANATOMY AND PHYSIOLOGY I, II (BIOL 144, 145)

Four credits, one quarter each.

BIOL 144 The student will gain knowledge of the structure of the human body as it relates to function. He will determine the organization and interrelationship of cell, tissues, organs, and body systems as they form an integrated functional organism. The student will also acquire an appreciable understanding of the structure and function of each major system of the human body.

BIOL 145 This course is a continuation and completion of BIOL 144.

Washington Technical Institute

MICROBIOLOGY (BIOL 156)

Four credits, one quarter.

The student will acquire a knowledge of bacteria and other microorganisms. He will also acquire an understanding of their structure, function and pathogenic nature as related to infection, body resistance and diagnostic testing. The student will perform laboratory work designed to enable him to use simple and basic bacteriological techniques in recognizing and culturing selected groups of microorganisms.

Washington Technical Institute

THE LABORATORY ANIMAL (BIOL 236)

Three credits, one quarter.

The student will acquire a knowledge of the anatomy and physiology of animals commonly used in biological research laboratories. The student will also learn how to care for and handle live animals. He will make necessary injections, prepare animals for surgical operations, and in some instances perform simple operations and administer post-operative care.

Washington Technical Institute

CELL BIOLOGY (BIOL 237)

Four credits, one quarter.

The student will gain an understanding of the cell as a living unit of structure and function. He will familiarize himself with the fine structures of cells and associated functions, processes of energy transformation and their relationship to the chemical and structural organization of the cell. The student will also acquire certain basic concepts of the role of the cell in heredity and development.

Washington Technical Institute

SCIENCE LABORATORY TECHNIQUES (BIOL 238)

Four credits, one quarter.

The student will devise laboratory safety habits and acquire skills in science laboratory techniques in the various disciplines of science. Some of these techniques will include the use of the metric system, the use of the slide rule, dissection techniques, sterilization techniques, aseptic procedures, weighing, and kymographic techniques.

Washington Technical Institute

MICROBIOLOGIC TECHNIQUES (BIOL 257)

Four credits, one quarter.

The student will perform many laboratory procedures essential to the operations of a microbiology laboratory. He will learn the theory, care and proper function of manipulating the microscope. He will also become proficient in sterilization procedures, preparation of stains, and the principles for the use of microbiologic stains. He will acquire skills in learning to inoculate plates and tubes as well as the various methods of incubation of microorganisms.

Washington Technical Institute

INSTRUMENTATION I, II (BIOL 264, 265)

Four credits, one quarter each.

BIOL 264 This course is concerned with the application of instrumental methods of analysis. The student will gain experience in the operation of a wide variety of instruments. Such methods as potentiometry, electroytic separations, conductometry, colorimetry, spectrophometry and chromatoprophy will be emphasized.

Prerequisite: BIOL 236.

BIOL 265 Through cooperative programs established with various scientific laboratories in the area, the student will acquire an appreciable knowledge of the use and operation of larger and more complex instruments than those studied in BIOL 264.

Prerequisite: BIOL 264.

Washington Technical Institute

PHOTOMICROGRAPHY (BIOL 274)

Four credits, one quarter.

The student will acquire skills in recording photographically enlarged images of minute objects on light sensitive material. The student will acquire conventional techniques and methods used most frequently in biological research for the taking of photomicrographs at low, medium, and high magnifications. He will learn how to keep accurate records of all exposures made when taking photomicrographs.

Washington Technical Institute

INTRODUCTORY GENETICS I, II (BIOL 256, 257)

Four credits, one quarter each.

Principles and concepts of classical and theoretical genetics with experimental work in Mendelian genetics and genetical statistics are included in this course.

Prerequisite: BIOL 103 or equivalent.

Northern Virginia Community College

GENERAL GENETICS (BIOL 209)

Four credits, one semester.

A general survey of the field of genetics is included along with a review of classical Mendelian concepts, with emphasis on recent advances in the field. Application and modern use of genetic knowledge in the fields of health, medicine, agriculture, etc., will be stressed.

Prerequisite: 4 hours of biology and 4 hours of mathematics or other science, or the permission of the instructor.

Montgomery College

GENERAL GENETICS (NB 308)

Four credits, one quarter.

A survey of the mechanisms of inheritance and expression hereditary traits of representative microorganisms, plants, and animals; emphasis will be placed on this structure and function of the gene at the molecular level.

Prerequisites: Biol. Science I, II, III.

Federal City College

GENERAL PHYSIOLOGY (NB 204, 205)

Four credits, one quarter each.

NB 204 The principles of animal physiology are presented with reference to the functioning of cells, tissue and organs. Emphasis will be placed on basic cell functions and biological control systems such as membrane phenomena, energy and cellular metabolism, protein synthesis, muscle contraction, etc.

Prerequisites: Biological Science I, II, III. One year of General Chemistry.

NB 205 Basic concepts of human physiology will be presented to provide the background for understanding normal and abnormal body functions. Emphasis will be placed on the coordination of body functions such as circulation, respiration, reproduction, immune mechanism, etc.

Prerequisites: General Physiology 204.

Federal City College

HUMAN ANATOMY (NB 302)

Four credits, one quarter.

A general study of the structure and organization of organs and organ systems of the human body will be presented. Intensive interest will be placed on the skeletal, muscular, circulatory, digestive and nervous systems.

Prerequisites: Biological Science I, II, III.

Federal City College

HUMAN ANATOMY AND PHYSIOLOGY I & II (BIOL 105, 106)

Four credits, one semester each course.

Normal structure and function of the skeletal, muscular, circulatory, nervous, reproductive, respiratory, edocrine, digestive, and excretory systems of the human body; histology of various organs and tissues in connection with dissection of a vertebrate animal; physiological processes, early development of the embryo and modes of inheritance of several human traits will be studied.

Prerequisite: High School Biology or BIOL 101 (BIOL 105 is a prerequisite of 106).

Prince George's Community College

HUMAN ANATOMY AND PHYSIOLOGY I, II (BI 204, 205)

Four credits, one semester each.

BI 204 This course will contain a detailed study of the structure of the human body correlated with laboratory dissection of the cat.

Prerequisite: 4 hours of Biological Science.

BI 205 This course will include selected principles of vertebrate physiology. This course is offered second semester only.

Prerequisite: 4 hours of biological science, 4 semester hours of chemistry recommended.

Montgomery College

FUNCTIONAL ANATOMY (BIOL 107)

Five credits, one semester.

A one semester course that includes the basic structures and normal functioning of all the systems of the human body. Emphasis is on applications to para-medical oriented curricula.

Prerequisite: High School Biology or BIOL 101.

Prince George's Community College

COMPARATIVE ANATOMY (NB 301)

Four credits, one quarter.

This course is designed to study the interrelationship of form and function among the vertebrates, including dissections and demonstrations of representative vertebrate types, including fish, reptile, bird and animal.

Prerequisites: Biological Science I, II, III.

Federal City College

COMPARATIVE ANATOMY OF VERTEBRATES (BI 201)

Four credits, one semester.

The basic principles of functional anatomy of vertebrated animals are covered in this course. Dissection methods. Organ systems of chordates (fish, amphibia, reptile, birds, and mammal) are studied comparatively to show fundamental homology and individual adaptation, and comparability to human structure and function will be included.

Prerequisite: BI 121.

Montgomery College

COMPARATIVE VERTEBRATE EMBRYOLOGY (BIOL 227)

Six credits, one quarter.

This course will cover development of morphology of selected vertebrates.

Prerequisite: BIOL 103.

Northern Virginia Community College

INTRODUCTION VERTEBRATE ZOOLOGY I, II (BIOL 224, 225)

Three credits, one quarter each.

This course will cover the fundamentals of vertebrate anatomy, physiology, embryology, classification and evolution.

Prerequisite: BIOL 103 or 105.

Northern Virginia Community College

INVERTEBRATE ZOOLOGY (NB 303)

Four credits, one quarter.

A study of selected invertebrates, with special attention to those of the local area will be presented. Emphasis will be placed on the morphology, physiology, ecology and taxonomy of these organisms.

Federal City College

ZOOLOGY I, II (BI 121, 122)

Four credits, one semester each.

BI 121 Subject matter will include the systems of the vertebrate body and their functions. Introduction to embryology and genetics; acquainting students with the techniques of handling biological materials; dissection of a representative vertebrate also will be included.

BI 122 Evolution, distribution, and morphology of major groups of invertebrate animals will be covered in this course, along with the opportunity to observe behavior and experiment with living invertebrates.

Prerequisite: 4 hours of a biological science.

Montgomery College

ZOOLOGY FOR TECHNICIANS I (BIOL 124)

Four credits, one quarter.

The student will demonstrate an understanding of the fundamental concepts of the scientific method through a study of life ranging from the cell as a living unit to the more complex animal life. Through inquiry and investigation, the student will familiarize himself with and interpret basic concepts applicable to animal life which include cellular function, development, structure as related to function, diversity of type as related to common pattern, evolution, and interrelationship of organisms and their total relationship to the environment.

The student will perform laboratory experiments related to understanding zoological concepts as well as to learn and apply certain biological laboratory techniques.

Washington Technical Institute

BUSINESS AND COMMERCIAL LAW

BUSINESS LAW

One-half credit, one trimester.

The course is designed to help the student learn about his own rights and the rights of others in connection with contracts, leases, negotiable instruments, insurance, employment, sales, wills, etc.

Alexandria City Public Schools

BUSINESS LAW (BUSI 105)

Three credits, one semester.

The student is given an understanding and appreciation of legal problems; contracts, negotiable instruments, partnerships, corporations, real property, mortgages, leases, estates, property rights, and torts are also considered.

Prince George's Community College

BUSINESS LAW (MG 201, 202)

Three credits, one quarter each.

This course covers the legal aspects of commercial relationships, and will include contracts, agency, negotiable instruments, partnerships, corporations, real and personal property, sales, and torts.

Prerequisite: Sophomore standing or consent of instructor.

Montgomery College

BUSINESS LAW I, II, III (BUAD 241, 242, 243)

Three credits, one quarter each.

BUAD 241	This course is an introduction to the field of law, how it developed and how it operates as a method of control. Studies of the purpose of laws in our present-day complex society, the law of contracts, and the agencies are included.
BUAD 242	This course is a continuation of Business Law I (BUAD 241). The main topic to be studied is the Uniform Commercial Code as adopted in the various states.

Prerequisite: BUAD 241.

BUAD 243 This course is a continuation of Business Law I and II (BUAD 241, 242). Employment, bailment, partnerships, corporations, property will be studied.

Prerequisite: BUAD 241, 242.

Northern Virginia Community College

BUSINESS LAW (BSAD 180, 181)

Three credits, one semester each.

BSAD 180 Course covers the legal aspects of business relationships, contracts, negotiable instruments, agency, partnerships, corporations, real and personal property, and sales.

BSAD 181 Course covers the legal aspects of business relationships, contracts, negotiable instruments, agency partnerships, corporations, real and personal property, and sales, and is an extension of BSAD 180.

University College

BUSINESS LAW I (BUAD 146)

Three credits, one quarter.

The student will acquire a basis for understanding and applying rules of law to the operational concept of a business. The student will also identify and demonstrate the legal aspects of the principal instruments of business activity in the formulation, execution, and dissolution of contracts.

Washington Technical Institute

BUSINESS LAW II (BUAD 244)

Three credits, one quarter.

The student will demonstrate his knowledge of the legal aspects of negotiable instruments, and securities, rights and liabilities of business principals and agents, and law of sales in the operation and management of a business.

Prerequisite: BUAD 146.

Washington Technical Institute

BUSINESS LAW I (L–101)

Three credits, one trimester.

This course introduces the basic business transactions of contracts, agency and partnerships.

Southeastern University

BUSINESS LAW II, III (L–201, 202)

Three credit hours, one trimester each.

L–201 This course continues with the more sophisticated business transactions.

Prerequisite: L–101.

L–202 This course continues with additional fundamental classifications relating to business law.

Prerequisite: L–101.

Southeastern University

BUSINESS LAW III (BUAD 245)

Three credits, one quarter.

Students will apply the concept of the legal bases of formation and dissolution of ownership forms of business enterprises as they relate to insurance, real property, and torts.

Prerequisite: BUAD 244.

Washington Technical Institute

COMMERCIAL LAW I, II (COMM 41, 42)

Three credits, one semester.

COMM 41 This is an introductory course in Commercial Law.

COMMERCIAL LAW I, II (COMM 41, 42—Continued)

COMM 42 This is a continuation of Comm 41.

Prerequisite: Comm 41, Commercial Law I.

University of Virginia School of General Studies

BUSINESS MANAGEMENT

INTRODUCTION TO BOOKKEEPING

Non-credit, two semesters.

This course would be of special interest to those employed as bookkeepers with no previous training. Essential to managers or owners of small businesses, and necessary for those considering a career in data processing.

Arlington Public Schools

BOOKKEEPING

Non-credit, one semester.

Open To: All adult residents of Metropolitan Washington, D.C.

Public Schools of District of Columbia

BOOKKEEPING

Non-credit, one semester.

This is a basic course in the elements of bookkeeping.

Prince George's County Public Schools

BOOKKEEPING

Non-credit, sessions vary.

This course presents the double entry bookkeeping method. It places emphasis on the how and why of bookkeeping and a basis for further study in accounting.

Alexandria City Public Schools

ADVANCED BOOKKEEPING

Non-credit, one semester.

For those students who have had previous training in bookkeeping and accounting.

Arlington Public Schools

BOOKKEEPING & ACCOUNTING I-A (ED 656) I-B (Ed 657)

Non-credit, one semester each.

This course is designed for people engaged in everyday office work. Accounting cycle, theory and application of systematic recording, presentation of financial transactions of an enterprise, statement construction, account classification, adjusting and closing with the use of work sheet and ledger development will be studied in this course.

Fairfax County Public Schools

FEDERAL FISCAL PROCEDURE (4–112)

Two credits, one semester each.

This is a two-semester course intended to provide comprehensive understanding of basic fiscal and accounting laws, rules and regulations of the Federal Government and their application to specific fiscal activities. First semester will include a general background of laws and regulations; symbolization of accounts; processing of payrolls; handling of leave, retirement, tax and bonds; and administrative examination of travel and transportation payments. Second semester is a continuation of study of basic laws, rules and regulations covering fiscal and accounting activities, with emphasis on procedures involving disbursements for supplies, equipment, utilities, and other items, use of imprest funds and agent cashiers; handling of billings, collections, and deposits; effecting adjustments for errors; handling claims and uncollectible debts; and responsibilities of certifying officers.

United States Department of Agriculture Graduate School

PRINCIPLES OF MANAGEMENT (BUSI 160)

Three credits, one semester.

The role of the business manager and the decision-making process; integration of the functions of business to the management of business; decision making case problems related to management; and evolution of management thinking are covered.

Prerequisite: BUSI 101.

Prince George's Community College

BUSINESS MANAGEMENT & ADMINISTRATION

Non-credit, one semester.

This course consists of evening classes in business management and administration techniques.

Prince Georges County Public Schools

FINANCIAL PLANNING AND INVESTMENTS (BUSI 161)

Three credits, one semester.

This course is for students who desire practical application of financial planning concepts in the management of their finances along with the study of factors of investment analysis and investment selection. (Formerly titled: Personal Finance.)

Prince George's Community College

BUSINESS ORGANIZATION AND MANAGEMENT (B-101)

Three credits, one trimester.

This course covers the basic functions of a business enterprise, such as production, marketing and finance. Considerable attention is devoted to certain staff services, such as accounting, personnel and purchasing. Emphasis is placed on the preparation required for successful careers in business and government.

Southeastern University

CARTOGRAPHY

CARTOGRAPHY I (8–125)

Three credits, one semester.

This course is designed for the layman, beginner, technician, and cartographer working solely in specialized facets of cartography. It will introduce participants to all phases of the broad field of cartography in simple terms; history of maps; size and shape of earth; common projections; elementary plane and geodetic surveying; topography; hydrography and bathymetry; photogrammetry; oceanography; classification. Also including evaluation, compilation, construction, and revision of maps and charts; methods and techniques of reproduction; surveying by electronic methods. This course can be utilized by technicians as partial requirement for cartographer rating..

United States Department of Agriculture Graduate School

CARTOGRAPHIC TECHNIQUES AND MAP REPRODUCTION (8–240)

Three credits, one semester.

Factors, commensurate with scale, to be considered before designing a chart or map for reproduction; selection of reproduction process; shaping of job for selected process. Reproduction support during the compilation stage; types of line and half tone copy; types of media used for line, half tone, and scribed originals; color separations; relief techniques; reproduction techniques utilized in correcting chart/map to date; cartographic typography; photolithography, letter press, gravure, ozalid, and photolithography, letter press, gravure, ozalid, and photogelatin processes, including historical background are additional items of interest. Demonstrations of cartographic and reproduction techniques will be utilized by the U.S. Naval Oceanographic Office, Coast and Geodetic Survey, Army Map Service, U.S. Geological Survey, and National Geographic Society, including historical background.

Prerequisite: Cartography I, or special permission.

United States Department of Agriculture Graduate School

CARTOGRAPHY AND GRAPHICS I AND II (GE 151, 152)

Three credits, one semester each.

These courses are an introduction to various types of maps, charts and plans; map scales, coordinates, and projections. The techniques and problems of compilation, design and construction of maps and graphs, the methods and approaches to presenting data in graphic form are included.

Prerequisite: GE 151 for GE 152.

Montgomery College

CARTOGRAPHIC SCIENCE (PS-105)

Three credits, one trimester.

The student will study the science of map making and graphic illustration. The different kinds and structures of maps and graphs; data collection techniques and basic surveying; map scales and projections; basic drafting; use of zipatone, air brush, and other illustration techniques, also will be studied.

Prerequisite: PS-101.

Southeastern University

MAPS AND CHARTS (1970-71 AND ALTERNATIVE YEARS) (2-114)

Two credits, one semester.

This course will include a survey to give analyst, researcher, librarian or teacher working with maps understanding of both domestic and foreign maps and charts, the agencies that produce them, their catalogs and indexes, and their availability in map libraries. A study of United States, foreign, and international mapping activities on workshop basis to permit presentation and solution of individual problems, including pertinent information on map libraries, reference facilities, map acquisition, cataloguing and processing procedures and techniques in addition, presentation of maps, charts, reference materials, aids, and tools for laboratory use.

United States Department of Agriculture Graduate School

MAP PROJECTIONS AND GRID SYSTEMS (8-223)

Three credits, one semester.

This course is designed for cartographers and map research or intelligence specialists. Basic principles, computations and layout methods, definitions, classifications, characteristics, and identification methods; coordination of systems in present day use, including rectangular, broad area, and true military grid and applications of programming to cartography; plotting and constructing map projections and grid systems by automated techniques; and methods of displaying shoreline and plotting date on any type map projection by ADP are other items of interest displayed.

United States Department of Agriculture Graduate School

CHEMISTRY

CHEMISTRY (CHEM 06)

Five credits, one quarter.

A foundation course in general chemistry designed to develop a basic understanding of inorganic and organic chemistry.

Northern Virginia Community College

INTRODUCTORY COLLEGE CHEMISTRY A & B (CH 100 A & B)

A—Three credits, one semester.

B—Four credits, one semester.

These courses will include fundamental chemical mathematics, slide rule, metric system matter, energy, chemical and physical properties, laws of conservation of mass-energy, foundations of atomic theories, elements, compounds, formulas, stoichiometry, gas laws.

Montgomery College

INTRODUCTORY COLLEGE CHEMISTRY (CHEM 2)

Two credits, one semester.

This course is designed for liberal arts students.

Prerequisite: CHEM 1.

University of Virginia George Mason College

INTRODUCTORY COLLEGE CHEMISTRY (CHEM 2)

Four credits, one semester.

This course is designed for liberal arts students. (A $5.00 refundable breakage free will be collected at the first laboratory meeting.) Lecture and laboratory are included in this course.

Prerequisite: CHEM 1.

University of Virginia School of General Studies

GENERAL CHEMISTRY (5-100)

Three credits, one semester.

This course is designed to provide background for workers in professional and subprofessional work.

United States Department of Agriculture Graduate School

INTRODUCTORY CHEMISTRY (CH 103)

Four credits, one semester.

This course is an introduction to the fundamental concepts of inorganic, organic, and biochemistry. Matter, solutions, properties of organic compounds, and chemical reactions involving fats, carbohydrates, proteins, enzymes, vitamins, and hormones.

Prerequisite: Successful completion of high school chemistry or successful completion of CH 100 or consent of instructor.

Montgomery College

INTRODUCTORY CHEMISTRY (101, 102, 103)

Four credits, one quarter each.

These courses are designed for students who plan to take only one year of chemistry. Chemical behavior of inorganic and organic substances interpreted in terms of underlying laws, theories and concepts will be studied.

Prerequisite: Math 101.

Federal City College

PRINCIPLES OF CHEMISTRY (CH 101, 102)

Four credits, one semester each.

Fundamental concepts of atomic structure, chemical bonding, weight relationships, kinetic-molecular theory, solutions, oxidation-reduction and equilibrium are included in this course. Properties of the elements, with emphasis on atomic structure and the periodic system as pertained, along with a brief introduction to nuclear and organic chemistry are also covered.

Prerequisite: Successful completion of high school chemistry or successful completion of CH 100 or consent of the instructor for CH 101; CH 101 for CH 102 or if the student has successfully completed the advanced placement test, the CH 101 requirement will be waived.

Montgomery College

GENERAL CHEMISTRY (106, 107, 108)

Four credits, one quarter each.

These are intensive courses for science majors. Fundamental principles, theories and laws are used to interpret the behavior of matter. These courses include properties of solution, chemical equilibria and qualitative analysis.

Prerequisite: MATH 101.

Federal City College

GENERAL CHEMISTRY I (CHEM 111)

Four credits, one quarter.

The student will study fundamental concepts and principles in inorganic chemistry. He will investigate atomic structure, periodic classification, chemical bonding, the gaseous state and stoichiometry.

Washington Technical Institute

GENERAL CHEMISTRY

Non-credit, one semester.

The material covered in this course is the same as that provided through an introduction to the study of chemistry at the high school level. Subjects such as atomic structure, chemical reactions, chemical equilibrium, liquid and solid states, periodic table and chemical calculations are examined.

Prerequisite: Basic Math.

Washington Saturday College

GENERAL CHEMISTRY I (CHEM 101)

Four credits, one semester.

This introductory course in chemistry will familiarize one with laboratory equipment, techniques and terminology, symbol formulas, atomic structure, bonding, and other fundamental concepts as discussed.

Prince George's Community College

GENERAL CHEMISTRY (CHEM 001, 003)

Four credits, one semester each.

The formation of chemical formulas and their names and a basic introduction to chemical mathematics will be included.

Prerequisite: One year of high school algebra or equivalent.

University College

GENERAL CHEMISTRY I, II, III (CHEM 101, 102, 103)

Four credits, one quarter each.

Introduction to the fundamental laws and the theories of chemistry; most important elements and their compounds; properties and uses of the more important metallic and nonmetallic elements and their general importance are included in these courses.

Northern Virginia Community College

GENERAL INORGANIC CHEMISTRY I, II, III (CHEM 111, 112, 113)

Four credits, one quarter each.

These courses will cover the fundamental principles and laws underlying chemical action with special emphasis on the non-metals, their compounds, theories and problems. Laboratory work for the first two quarters will include dealings with the non-metallic elements and their compounds, and the last quarter will deal with the theories of qualitative and quantitative analysis.

Northern Virginia Community College

GENERAL CHEMISTRY II (CHEM 102)

Four credits, one semester.

Descriptive chemistry of the elements, including hydrogen, oxygen, alkali metals, alkaline-earth metals, transition elements, the elements of Group III, IV, V, and VI, and the halogens, are studied in addition to an introduction to organic chemistry, nuclear structure, and radioactivity. Should be elected by Science Majors or Engineering Students.

Prerequisite: Chem 101.

Prince George's Community College

GENERAL CHEMISTRY II, III (CHEM 112, 113)

Four credits, one quarter each.

CHEM 112 The student will gain knowledge of thermochemistry, the liquid and solid states, solutions, acid-base reactions, chemical equilibrium and kinetics.

Prerequisite: CHEM 111.

CHEM 113 The student will study ionic equilibria, electrochemistry, oxidation-reduction and nuclear chemistry. The laboratory work is chiefly concerned with qualitative analysis.

Prerequisite: CHEM 112.

Washington Technical Institute

CHEMISTRY FOR NURSES (CHEM 116)

Four credits, one quarter.

The student will gain an understanding of the fundamental concepts of inorganic, organic, and biochemistry. He will acquire a knowledge of the structure, properties and reactions of elements and compounds, solutions, properties of organic compounds and some chemical reactions of fats, carbohydrates, proteins, enzymes, vitamins and hormones.

Washington Technical Institute

GENERAL CHEMISTRY FOR NON-SCIENCE MAJORS (CH 109, 110)

Four credits, one semester each.

These courses enable the student to develop an understanding of basic principles which are the foundations of chemistry, to realize the significance of chemistry in our society, and to develop the facility for critical and unbiased observation.

Montgomery College

TECHNICAL CHEMISTRY I, II (CH 151, 152)

Three credits, one semester each.

These introductory courses in chemistry are oriented toward chemical technology and stress the application of principles rather than dwelling on the theoretical aspects of chemistry. Familiarity with laboratory equipment, techniques and terminology is stressed. Specific topics include the use of symbols, formulas, atomic structure, bonding, periodic chart, state of matter, elements, weight relationships, nomenclature of inorganic compounds, solutions, equilibrium, and acid bases and salts.

Montgomery College

CHEMICAL CALCULATIONS I, II (CHEM 161, 162)

Two credits, one quarter each.

Introduction to chemical operations of mathematical nature; calculations included are material balance, heat balance equilibrium and reaction rate calculations; fluid mechanics, correlating data and economic considerations.

Northern Virginia Community College

QUANTITATIVE AND INSTRUMENTAL ANALYSIS I, II, III (CHEM 211, 212, 213)

Five credits, one quarter each.

CHEM 211 The student will employ gravimetric and volumetric methods for the quantitative analysis of a number of inorganic materials. He will focus attention on the theory of weighing, stoichiometry, and sources of errors in quantitative determinations.

Prerequisite: CHEM 113.

CHEM 212 The student will perform quantitative analysis using conductometric, potentiometric, and palarographic procedures. He will also investigate chromatographic methods of analysis.

Prerequisite: CHEM 211.

CHEM 213 The student will perform quantitative analysis using calorimetric and spectrophotometric methods.

Prerequisite: CHEM 212.

Washington Technical Institute

ORGANIC CHEMISTRY I, II (CHEM 214, 215)

Four credits, one quarter each.

CHEM 214 The student will investigate the synthesis, reactions, structure and properties of aliphatic and aromatic compounds. He will employ modern concepts of chemical bonding in the study of these substances.

Prerequisite: CHEM 113.

CHEM 215 Continuation of Organic Chemistry I. The student will study the mechanism of ionic and free radical reactions. He will experimentally investigate the identification and characterization of various classes of organic compounds.

Prerequisite: CHEM 214.

Washington Technical Institute

BIOCHEMISTRY (CHEM 219)

Four credits, one quarter.

The student will investigate the chemistry of carbohydrates, liquids, proteins, nucleic acids and other compounds of biological interest. He will explore the mechanism of enzyme action and metabolism of various materials. The student will employ traditional as well as modern physical methods in the experimental investigation of these compounds as related to body functions.

Prerequisite: CHEM 215.

Washington Technical Institute

INTRODUCTORY BIOCHEMISTRY (CHEM)

Three credits, one semester.

(George Mason College Chemistry 461)

This undergraduate course may be used to satisfy part of the final 30-hours of resident credit required by degree seeking students of the College and Center.

Prerequisite: Organic Chemistry

University of Virginia School of General Studies

CIVIL ENGINEERING

INTRODUCTION TO GEODESY (8-132)

Two credits, one semester.

A series of lectures designed to acquaint the student with many general topics involved in the space age, with particular emphasis on modern thinking and methods. Use of mathematics minimized to fit capabilities of a particular class; nevertheless, mathematical principles through trigonometry, desirable and helpful, will be included. Some geometric problems encountered lunar mapping, instruments, and methods are also covered.

United States Department of Agriculture Graduate School

ELEMENTS OF SURVEYING (CIVL 101)

Three credits, one quarter.

The student will be introduced to plane surveying, including field notes, linear measurements, leveling, angles, bearings, azimuths, the transit, and traversing.

Washington Technical Institute

ELEMENTARY SURVEYING (8-135)

Three credits, one semester.

This course will instruct the student in the use of transit, level, compass, and accessory equipment; adjustment of instruments; field methods of transit-and-tape traverse and engineers' leveling (differential and profile). Computations connected with above including adjustment of traverses by compass and transit rules. Computation of latitudes, departures, and areas will also be included.

Prerequisite: Plane trigonometry.

United States Department of Agriculture Graduate School

SURVEYING COMPUTATIONS (CIVL 102)

Three credits, one quarter.

The student will be introduced to the theory of measurements and errors, traverse computations, determination of area, and topographic mapping.

Prerequisite: CIVL 101.

Washington Technical Institute

FIELD SURVEYS (CIVL 103)

Three credits, one quarter.

The student will learn method of stadia, topographic surveys, the plane table, and construction surveys.

Prerequisite: CIVL 102.

Washington Technical Institute

SURVEYING

Non-credit, one semester.

This course in basic surveying is intended for students interested in learning principles of the field.

Prince George's County High Schools

PLANE SURVEYING (ES 201, 202)

Two credits, one semester each.

This course covers the theory and practice in the use of the tape, compass, transit, and level. General survey methods, traversing, area, coordinates, profiles, cross-sections, volume, adjustment of instruments. ES 201 offered first semester, ES 202 offered second semester.

Prerequisite: MA 104 or MA 119 or equivalent.

Montgomery College

SURVEYING I (NE 306)

Three credits, one quarter.

The course emphasizes the use, adjustment, and care of surveying instruments; theory of tapes, compass, transit, and level; ordinary methods of surveying, plotting, and computing; analysis of errors in observations.

Federal City College

SURVEYING I (ES 271)

Three credits, one semester.

This is a basic surveying course to acquaint the student with the fundamentals, calculations, terminology, instruments and procedures involved in surveying for buildings, highways, etc. It includes the measurement of distances, angles and bearings, using tape, level, compass and transit; principles, usage, and care of the level and transit; study of curves, stadia and topographic and land surveying; and computation of areas, traverses, lines, and grades. Proper field procedures for desired precision and the importance of accuracy are stressed. Horizontal and vertical ground controls are established by means of the tapel, level, compass, and transit and are applied to practical problems in area and volume calculations, topographic surveys, boundary, and construction surveys. Problems include techniques for staking out a building, highway, railroad, pipelines, subdivisions, etc.

Prerequisite: MA 152 or equivalent.

Montgomery College

SOILS TESTING (CIVL 216)

Three credits, one quarter.

The student will be introduced to soils, soil testing, specific gravity, Alterberg limits, grain size analysis, compaction tests, premeability, consolidation and direct shear.

Prerequisite: MATH 113.

Washington Technical Institute

BITUMINOUS MATERIAL TESTING (CIVL 217)

Three credits, one quarter.

The student will study basic properties of bituminous materials (primarily asphalt cement), the testing of asphalt materials and the quality control of asphaltic concrete mixtures.

Prerequisite: MATH 113.

Washington Technical Institute

CONCRETE TESTING (CIVL 218)

Three credits, one quarter.

The student will become familiar with the basic properties or Portland cement concrete; design, mixing, testing, and quality control during construction are considered.

Prerequisite: MATH 113.

Washington Technical Institute

SURVEYING II (ES 272)

Three credits, one semester.

This is a continuation of elementary surveying with emphasis on advanced techniques, equipment applied to construction survey problems; area computations, U.S. system of land surveys, stadia, contours, building layouts, city surveys, basic principles of aerial photogrammetry; preliminary and construction surveys for highways, railroads, and building factors involved in the engineering location of a building, highway or railroad; an introduction to the application of curve work including simple curves, spiral curves, and vertical curves; the determination of solutions for earthwork problems; modern instruments such as photogrammetry equipment, theodolities, surveying altimeters, and electronic measuring devices such as the geodometer, tellurometer, electrotope, and others.

Prerequisite: ES 271.

Montgomery College

SURVEYING (ADVANCED)

Non-credit, one semester.

This is a continuing course of "Surveying", also offered through Prince George's County High Schools.

Prince George's County High Schools

ADVANCED SURVEYING (CIVL 226)

Three credits, one quarter.

The student will become competent in the adjustments of instruments, determination of meridian, and boundary surveys.

Prerequisite: CIVL 103.

Washington Technical Institute

GROUND METHODS OF TOPOGRAPHIC SURVEYING

Three credits, one semester.

Stadia method, mapping with transit plane table mapping, plane table triangulation and special problems; also, methods and practices in map construction will be included in this course.

Prerequisite: Elementary Surveying.

United States Department of Agriculture Graduate School

HYDRAULICS (CIVIL 207)

Three credits, one quarter.

The student will become familiar with the elements of hydraulics with emphasis on the applications of hydraulic principles to the problems of water supply and sewage disposal systems.

Washington Technical Institute

GEODETIC SURVEYING (8–218)

Three credits, one semester.

The student will study theory and practice of first-and second-order triangulation, traverse, and leveling. He will learn the use of baseline equipment, repeating and direction theodolites, and geodetic leveling equipment. Field computations are necessary to insure accuracy of observations.

Prerequisite: Elementary Surveying or special permission.

United States Department of Agriculture Graduate School

COMPUTATION AND ADJUSTMENT OF GEODETIC OBSERVATIONS (8–219)

Three credits, one semester.

Office procedures in final computation and adjustment of field observations will be introduced in Geodetic Surveying. Least square approach to adjustment of networks of traverse and leveling and simple triangulation figures, will be studied by the student.

Prerequisite: Geodetic Surveying, or equivalent, or special permission.

United States Department of Agriculture Graduate School

PHOTOGRAMMETRY (CIVL 227)

Three credits, one quarter.

The student will be introduced to aerial photography, ground control for photogrammetry, principles of radial line plotting and planimetric mapping, stereoscopy and parrallay.

Prerequisite: CIVL 102.

Washington Technical Institute

ROUTE SURVEYING (CIVL 228)

Three credits, one quarter.

The student will make a study of calculation and stakeout of circular and parabolic curves, and determination of earthwork volumes.

Prerequisite: CIVL 103.

Washington Technical Institute

ROUTE SURVEYING (8–215)

Three credits, one semester.

This course will include theory and practice of surveying for railroads, highways, and canals. Preliminary and location surveys, cross sections, earthwork quantities, and transition spirals are additional areas covered.

Prerequisites: Elementary Surveying and plane trigonometry.

United States Department of Agriculture Graduate School

CIVIL SERVICE EXAMS

CIVIL SERVICE PREPARATION

Non-credit; sessions vary.

This course provides preparation exercises for Civil Service examinations.

Catholic Archdiocese of Washington

PREPARATION FOR CIVIL SERVICE EXAMINATION

Non-credit, one semester.

This course will include instruction in methods of filling out employment application forms and writing letters of application. It will also help the students learn how to study for and take the written general abilities civil service examinations for clerk-typists and stenographers. Adult education students who wish to take a civil service examination should register with the business education teacher.

Arlington Public Schools

CIVIL SERVICE EXAMINATION PREPARATION (ED 649)

Non-credit, one semester.

This refresher course will help students in both verbal and clerical abilities area of the Civil Service Federal Office Assistant examination. Typing and shorthand proficiency certificates may be obtained in typing and shorthand classes.

Fairfax County Public Schools

FEDERAL SERVICE ENTRANCE EXAMINATION PREPARATION

Non-credit, one semester each.

The FSEE is the principal examination given for persons who want professional, technical, or management careers in the government. Study materials will relate to types of questions used on the examination. Text—$4.

Fairfax County Public Schools

FEDERAL SERVICE ENTRANCE EXAMINATION MATHEMATICS

Non-credit, one semester.

This course is specifically intended for persons who are preparing to take the Federal Service Entrance Examination (FSEE). It includes classroom solution of sample problems from previous examinations. Objective of the course is to prepare the student to pass the mathematics section of the FSEE.

Washington Saturday College

FEDERAL SERVICE ENTRANCE EXAM

Non-credit, one semester.

Preparatory course for the examination in the following portions:

English, 6:30—9:30 P.M.
Math, 6:30—9:30 P.M.

Prince George's County High Schools

FEDERAL SERVICE ENTRANCE EXAM

Non-credit, one semester.

This course provides evening classes for Federal Service Entrance Examination preparation.

Prince George's County Public Schools

COMMUNITY PLANNING

INTRODUCTION TO COMMUNITY PLANNING (PLAN E22)

Three credits, one semester.

This is an introductory course in community planning and ecology.

University of Virginia School of General Studies

COMMUNITY PLANNING I, II (GE 161, 162)

Three credits, one semester each.

GE 161 Introduction to the history and structure of community planning will be covered in this course. It is an examination of the basic concepts and principles of urban and regional planning, of the role and function of the city, the development and growth of regions, and the legislative and administrative framework of planning agencies. It will also cover all matters viewed within the context of the physical and social conditions found in urban and rural America today. (Offered first semester.)

GE 162 This course includes the problems, practice, and programs of community planning; formulation, development and implementation of comprehensive plans; basic data studies on population, land use, and transportation, among others; examination of the social forces at work in the neighborhood, the community, the region; survey of programs and practices on zoning, subdivision, renewal, capital improvements, and community action involved in the realization of plans and planning. (Offered second semester).

Prerequisite: GE 161.

Montgomery College

INTRODUCTION TO COMPUTER SCIENCE

INTRODUCTION TO COMPUTER SCIENCE (CS 101)

Three credits, one semester.

An introduction to the scope, significance, history, and development of data processing; organizations and their sources of data; number systems; and data presentation will be included in this course. Hardware and software, operations and data control, systems analysis, and design will also be studied.

Prerequisite: Two years of high school mathematics or consent of instructor.

Montgomery College

COMPUTER CONCEPTS I, II, III (BC 102, 103, 104)

Four credits, one quarter each.

The purpose of this course is to provide a basic understanding of automatic data processing to include EAM equipment, the computer memory, step-by-step operations, and stored programs. These concepts are combined to show the functions associated with a computer or data processor. In addition, the fundamental ideas of computing are presented; the algorithm, its expression as a flowchart, and a conceptual model of a computer.

Prerequisites: For Course II, Concepts I; for Course III, Algebra II and Concepts II.

Federal City College

INTRODUCTION TO COMPUTERS (DP 030)

Non-credit, one semester.

Evening classes. The student will learn the elementary concepts of computers.

Prince George's County Public Schools

COMPUTER SCIENCE I, II (EDP-101, 102)

Three credits, one trimester each.

EDP 101 This course is an introduction to computers and programming.

Topics included are basic programming systems, logic of programming, survey of the history of computing, an elementary description of computer hardware and peripheral equipment, data communication and time sharing. Study includes "hands on" experience using a wide range of remote access equipment.

Prerequisite: MA 101

EDP 102 This course is a continuation of EDP–101. Topics will include systems analysis, documentation, input-output, formation of data bases and systematic study of various concepts of computers. Study includes "hands on" experience using remote access equipment comprising problems relating to commercial and industrial applications.

Prerequisite: EDP–101.

Southeastern University

COMPUTER MANAGEMENT

ADVANCED COMPUTER ELECTRONICS SEMINAR

Non-credit, one semester.

This course is designed to give students an opportunity to study advanced computer systems and repair techniques. Laboratory experiences and resource persons will be utilized throughout this course.

Arlington Public Schools

ELECTRONIC BUSINESS MACHINES (CS 104)

Two credits, one semester.

The student will study the development of practical data processing applications on the latest automatic and electronic business machines. Solution to mathematical and business problems by using the programming and decision-making abilities of the new desk top and arithmetic programming devices are included in this course.

Montgomery College

OPERATIONS

AUXILIARY EQUIPMENT OPERATION (DAPR 18)

Four credits, one quarter.

This course is designed to develop competence in the operation and control of data processing machines. Emphasis is placed upon machine operating techniques for the key punch, verifier, sorter, collator, reproducer, and interpreter.

Prerequisite: Typing skill of 30 wpm or departmental permission.

Northern Virginia Community College

COMPUTER OPERATING SYSTEMS (CS 203)

Three credits, one semester.

This course, is a continuation and elaboration of CS 120. It covers the details of the IBM 360 operating system facilities and coding. The main topics include DOS/TOS concepts, data management and IOCS macros, and system control and service programs.

Prerequisite: CS 120 or consent of instructor.

Montgomery College

COMPUTER OPERATIONS I, II, III (EDPM 121, 122, 123)

Three credits, one quarter each.

EDPM 121	The student will be able to perform the basic functions of computer operations including initial program loading, card handling, mounting disks, tapes and paper, and evaluating control cards while preparing job streams. He will communicate with the supervisor program through the keyboard and be able to evaluate and use indicators and switches on the console.
EDPM 122	The student will be able to perform basic operations and media handling functions. He will assist programming students in running their exercises and evaluating their difficulties. The student will participate in systems generation of a current level operating system. Prerequisite: EDPM 121.

EDPM 123 The student will be able to set up jobs, operate the system independently, maintain logs, maintain files and assist in systems generation. The student will diagnose messages and difficulties to maintain the effectiveness of the system. The student will also prepare messages and incident reports relevant to the performance of jobs and equipment for which he is responsible.

Prerequisite: EDPM 122.

Washington Technical Institute

OPERATING SYSTEMS (EDPM 230)

Three credits, one quarter.

The student will gain experience in operating systems including logic, functions and coding. Given data set and device descriptions, the student will prepare job control statements which can be used to identify characteristics of the data set to the operating system.

Washington Technical Institute

COMPUTER OPERATING SYSTEMS (DAPR 251)

Four credits, one semester.

The student will learn the capabilities of operating systems on a third generation computer.

Prerequisite: DAPR 153–154 or equivalent, with a grade of "C" or better.

Prince George's Community College

COMPUTER OPERATION (BC-209)

Two credits, one quarter.

The student will learn the operating techniques of the IBM 360 system, console instructions, job control; (tape and disk handling procedures, and systems messages and job control language.

Prerequisite: Permission.

Federal City College

COMPUTER OPERATIONS (DAPR 136)

Three credits, one quarter.

This course is an introduction to operating procedure using a computer. It is a study of the console used to control the machine manually, correct errors, determine the status of machine circuits, registers, and determine the content of storage. The procedure for using input and output devices, punched paper tape, magnetic tape, random access devices, and printers is also studied.

Prerequisite: DAPR 130.

Northern Virginia Community College

COMPUTER OPERATIONS MANAGEMENT (DAPR 137)

Three credits, one quarter.

This course will cover the computer systems operations management. Emphasis is placed on the flow of data, control points, system flow charts, procedure write-ups, and scheduling personnel workloads.

Prerequisite: DAPR 136 or equivalent.

Northern Virginia Community College

COMPUTER OPERATORS (DAPR 154)

Four credit hours, one semester.

This course is to fully familiarize the students to operating hardware and software procedures of third generation computers (S/360).

Prerequisite: DAPR 153 or equivalent, with a grade of "C" or better.

Prince George's Community College

INTRODUCTION TO COMPUTER OPERATIONS (DAPR 130)

Three credits, one quarter.

Various types of hardware and related software systems including compilers, macro generators, utility routines, I/O, sort/merge, and prints will be studied.

Prerequisite: DAPR 106 or equivalent.

Northern Virginia Community College

OPERATORS TRAINING IBM 360/30 (3–321)

Three credits, one semester.

This course will include operating techniques of IBM system 360/30 in 1401 compatibility mode, with simulated console instructions and problems. The use of hexadecimal and binary numbering systems will be studied. Practical uses of compatibility initialization deck (CID) is included. No training in actual physical operation of machines is required.

United States Department of Agriculture Graduate School

O.S. OPERATORS TRAINING SYSTEM 360 (3–322)

Three credits, one semester. Repeated in Spring and Summer.

This course is designed to cover all aspects of operating 360 model 40 in 360 and 1401 compatibility mode. The basic job control language which is needed to run 360 mode; explanation of operating system; IPL of system; message given by system; complete console coverage; operation of 2540 card reader, 1403 printer, 2400 tape units, and 2311 disk drives to emulate in 1401–1460 mode; and new terms used in 360 modes are covered in this course.

United States Department of Agriculture Graduate School

PERIPHERAL EQUIPMENT (DAPR 110)

Three credits, one quarter.

Operating, wiring, and control of data processing machines other than electronic digital computers are included in this course. Experience is provided with the equipment in the data processing center using business problems for "hands-on" machine concepts.

Prerequisite: DAPR 106 or equivalent.

Northern Virginia Community College

UNIT RECORD I (DAPR 114, 115)

Three credits, one quarter each.

DAPR 114 Operating, wiring and control of data processing machines, other than electronic digital computer, including the card punch, verifier, interpreter, sorter, and document originating machine. Experience is provided with the equipment in the data processing center using business problems for "hands-on" machine concepts.

Prerequisite: DAPR 100 or DAPR 106 or equivalent.

DAPR 115 Comprehensive exercises involving the planning and wiring of a range of unit record equipment. Emphasis is on the accounting machine. Experience is provided with the equipment in the data processing center.

Prerequisite: DAPR 114.

Northern Virginia Community College

UNIT RECORD OPERATOR (DP 020)

Non-credit, one semester.

This course enables the student to learn unit record operation.

Prince George's County Public Schools

RELATED COMPUTER COURSES

COMPUTER GRAPHICS (NS 451)

Four credits, one quarter.

Picture description languages, control languages, and data structures; and graphic display and graphic input devices, and applications of graphic techniques are included in the course.

Prerequisite: NS 312.

Federal City College

COMPUTER GRAPHICS (BC–305)

Two credits, one quarter.

Display devices, interactive and passive graphics; data structure and graphics software; computer aided design and graphics analysis; and flowchart displays will be major items of interest to the student.

Prerequisite: BC–206.

Federal City College

COMPUTER ORGANIZATION (NS 312)

Three credits, one quarter.

System aspects of computer memory and access, control functions, input-output and system organizations are studied in this course.

Prerequisite: NS 311.

Federal City College

COMPUTER SIMULATION OF PHYSICAL SYSTEMS (NS 461)

Four credits, one quarter.

This course will cover the principles and programming of analog compilers, and simulation languages for digital computers. Case studies of representative physical systems on both analog and digital computers are included.

Prerequisite: NM 311 and NS 232.

Federal City College

COMPUTING MACHINERY (EDPM 106)

Three credits, one quarter.

The student will learn to wire and operate unit record equipment normally used in a data processing center at a basic level. The student will be taught to establish the relationship between the logic and functioning of unit record equipment and the computer.

Washington Technical Institute

DATA AND JOB MANAGEMENT (EDPM 126)

Three credits, one quarter.

The student will be able to function, as a computer operator in the administration and management of jobs and data in a computer installation. He will be able to schedule jobs for computer processing and to follow and handle the flow of jobs and data into and out of the computer installation. He will exhibit a functional awareness of the information necessary to the receipt, processing, and distribution of jobs and data through formal exercises and testing.

Prerequisite: EDPM 121.

Washington Technical Institute

DATA AND STORAGE STRUCTURES (CMSC 150)

Three credits, one semester.

This course is a study of intrinsic structures of data, such as arrays, strings, trees, and lists, and their relation to storage media. Representation of data structures in storage by records, files; special storage structures such as content addressed, trie, and associative memories; referencing, processing, and management techniques are based on the structuring, e.g., list processing. Storage and accessing efficiency, as well as dynamic flexibility of various methods will be studied.

Prerequisite: CMSC 100 and CMSC 102 or equivalent.

University College

DATA STRUCTURES (NS 431)

Three credits, one quarter.

Basic concepts of data structuring in memory and in peripherals;

lists strings, and arrays; storage and retrieval algorithms will be taught. List processing with the use of Lisp. Snobal, L6.

Prerequisite: NS 312.

Federal City College

INTRODUCTION TO DISCRETE STRUCTURES (CMSC 102)

Three credits, one semester.

This course is a review of set algebra including relations, partial ordering and mappings. It will include algebraic structures, semigroups and groups; a graph theory which includes trees and weighted graphs; and Boolean algebra and propositional logic. Also included are applications of these structures to various areas of computer science and computer engineering.

Prerequisite: CMSC 020 or equivalent.

University College

SIMULATION AND MODELLING (3-475)

Three credits, one semester.

This course is designed to provide the student with understanding of design, implementation, and application of simulation computer techniques. Simulation discussion will cover Monte Carlo simulation, deterministic simulation and models, and simulation language.

Prerequisites: FORTRAN programming and theory probability.

United States Department of Agriculture Graduate School

SWITCHING THEORY (NS 465)

Three credits, one quarter.

Theoretical foundations and mathematical techniques of logical circuit (combinatorial and sequential) designs are studied in this course.

Prerequisite: NS 311.

Federal City College

COMPUTER APPLICATIONS

COMPUTER APPLICATIONS I, II, AND III (BC 301, 302, 406)

Four credits, one quarter each.

The purpose of this course is to provide the student with tools for further study in the computer field and to facilitate his ability in the applicatory areas of computer usage. Content of courses will include: applications for probability and statistics in business, use of mathematical models in business, introduction to Queueing theory, and introduction to simulation; Computer Applications II is concerned with mathematical programming for business and numerical analysis for computers; Computer Applications III is concerned with principles of Queueing theory, Monte Carlo approach to Queueing problems, and linear programming problems.

Prerequisites: BS 202, NM 121.

Federal City College

COMPUTER APPLICATIONS IN ENGINEERNG (CS 141)

Three credits, one semester.

A problem-oriented programming approach applied to engineering and scientific applications. Emphasis is on practical work with FORTRAN or comparable conversational-type language in conjunction with available conventional or remote processing. This course is designed for students in engineering technology programs.

Prerequisite: Two years of high school mathematics or consent of instructor.

Montgomery College

COMPUTER SOFTWARE SYSTEMS (DAPR 287)

Three credits, one quarter.

The utilization of the computer manufacturer's software; practice problems and the use of software in the computer laboratory environment; and continued study of high level languages will be studied in this course.

Prerequisite: DAPR 144.

Northern Virginia Community College

DATA COMMUNICATIONS AND TELEPROCESSING (CS 205)

Three credits, one semester.

Emphasis is placed on three areas of teleprocessing. The areas covered are communication equipment and facilities, computer configurations and software, and practical applications. Case studies are employed, making use of available time-sharing services and conversational programming languages.

Prerequisite: CS 120 or equivalent courses or consent of instructor.

Montgomery College

REAL TIME SYSTEMS (NS 441)

Three credits, one quarter.

This course provides an introduction to the practice of real time data retrieval emphasizing the generation of fast, reliable input-output coding to service analog data sampling devices. Extensive use will be made of a medium size scientific computer system configured for this purpose.

Prerequisite: NS 312.

Federal City College

TRANSLATION SOFTWARE (NS 421)

Four credits, one quarter.

This course will cover the theory and practice of compiler and assembler system programs. Additional materials covered will include compile-time and run-time symbol tables, syntex scanning, object code, generation and optimization, error diagnostics.

Prerequisite: NS 302.

Federal City College

UNIT RECORD APPLICATIONS (DAPR 116)

Three credits, one quarter.

The concepts, objectives, and general approaches to typical data processing application will include accounts receivable and payable, payroll and inventory control. Practical laboratory experience is provided on the punch card equipment in the data processing center.

Prerequisite: DAPR 115.

Northern Virginia Community College

DIGITAL COMPUTER

COMPUTER ELECTRONICS

Non-credit, two semesters.

This course will involve the study of digital computer technology. Electro-Mechanical aspects of digital computers will be stressed rather than data processing. A review of basic electronics including theory of transistors and integrated circuits will precede instruction in computer circuits and systems. Appropriate laboratory experiments, utilizing a variety of test instruments, will be included.

Arlington Public Schools

FUNCTIONAL ORGANIZATION OF DIGITAL COMPUTER SYSTEMS (CMSC 166)

Three credits, one semester.

This is the same course as ENEE 166. Computer organization and configuration; inter-connection of sub-units into a computer system; arithmetic logic; storage structure and logic; control and sequencing; input-output systems will be studied in this course. A small computer and a modern large-scale computer system will be used to illustrate these concepts.

University College

INTRODUCTION TO DIGITAL LOGIC (NS 311)

Four credits, one quarter.

Boolean algebra, basic digital elements using integrated logic modules, logic design of counters, and arithmetic and control units are illustrated in this course.

Prerequisite: NS 232.

Federal City College

NUMERICAL METHODS FOR DIGITAL COMPUTERS (NS 232)

Four credits, one quarter.

This course includes basic concepts of numerical error, finite differences, interpolation, solution of equations, numerical integration, difference and differential equations.

Prerequisite: NM 121, NS 202.

Federal City College

PROGRAMMING

ADVANCED FORTRAN IV (DP-050)

Non-credit, one semester.

The student will learn the development of FORTRAN process and its application.

Prince George's County Public Schools

ADVANCED SCIENTIFIC PROGRAMMING I (CS 221)

Three credits, one semester each.

CS 221 This course designed for the science/mathematics option student and practical work with FORTRAN. Entire instruction set and the additional language facilities exercised in actual programming situations involving scientific and mathematical applications.

Prerequisite: CS 120 or consent of instructor.

CS 222 A sequence of programming problems of increasing complexity entailing more sophisticated use of both hardware and software. Each problem is motivated by a study of a topic in the field of numerical analysis. Interpolation techniques, least squares solution of transcendental equations, and numerical integration of differential equations are included.

Prerequisite: CS 221 or consent of instructor, and MA 203 or concurrent registration.

Montgomery College

ASSEMBLY LANGUAGE PROGRAMMING (BC 407)

Four credits, one quarter.

This course gives the student an understanding and training in IBM Systems 360 assembly language. This is the base language by which the FORTRAN and COBOL languages are complied. Its study will give the student an understanding and appreciation of the computer's inherent logic. It is close to the actual machine language and allows the use of programming techniques not otherwise available.

Federal City College

BASIC ASSEMBLY LANGUAGE (DAPR 257)

Four credits, one semester.

As an option in the data processing curriculum, this course introduces the student to the basic non-specialized language of IBM S/360.

Prerequisite: DAPR 156 or equivalent.

Prince George's Community College

BASIC COMPUTER PROGRAMMING (CS 120)

Three credits, one semester.

This course develops the basic concepts of computer programming through practical experience with the assembly programming language of a computer. Emphasis is on programming techniques such as logic diagramming and flow charting, block diagramming and coding, running and debugging, and documentation.

Prerequisite: CS 101 or consent of instructor.

Montgomery College

BASIC PROGRAMMING (NS 101)

Four credits, one quarter.

This course introduces the computer systems and programs, the basic interactive time-sharing language used; which introduces students to programming techniques.

Prerequisite: NM101

Federal City College

BUSINESS COMPUTER PROGRAMMING I (CS 231, 232)

Three credits, one semester each course.

CS 231 This course is designed for business option students. A "hands-on" approach to programming COBOL, a business-oriented computer language. Emphasis is on COBOL principles and instruction set, and upon the programming of numerous case problems involving various business applications.

Prerequisite: CS 120 or consent of instructor.

CS 232 This course is oriented toward business students. An extensive exposure applied to the FORTRAN language and to the practical aspects involved in programming FORTRAN specifically for selected business applications.

Prerequisite: CS 231 or consent of instructor.

Montgomery College

COBOL (DP 060)

Non-credit, one semester.

The student will gain knowledge in COBOL language.

Prince George's Community College

COBOL PROGRAMMING I (NS 211)

Three credits, one quarter.

The student studies formulation of algorithms in the COBOL computer language for the solution of problems containing heavy input-output requirements and little computational processing.

Prerequisites: NS 101 and Algebra I.

Federal City College

COBOL PROGRAMMING I (ED 690)

Non-credit, one semester each.

ED 690 This course introduces COBOL computing fundamentals (division paragraph, data items, etc.). The student will learn to understand COBOL programming logic flow, writing, debugging, and executing simple programs. Course emphasizes IBM/360 COBOL, but not necessarily limited to it.

Prerequisite: Computer Programming I-A or equivalent.

ED 691 This course will teach the student development and refinement of COBOL programing techniques developed in COBOL Programming I. Report writing and sort/

merge options will be investigated. The course will stress writing, debugging, and executing the complex programs developed in class. IBM COBOL is emphasized.

Prerequisite: COBOL Programming I or equivalent.

Fairfax County Public Schools

COBOL PROGRAMMING II (NS 212)

Three credits, one quarter.

This course is a continuation of NS 211.

Federal City College

COMPUTER PROGRAM APPLICATIONS (DAPR 286)

Four credits, one quarter.

The student will be taught characteristics and requirements of basic business applications, and a design of a computer solution to an application as a case study.

Prerequisite: DAPR 256.

Northern Virginia Community College

COBOL PROGRAMMING I, II (EDPM 214, 215)

Three credits, one quarter each.

EDPM 214 The student will be able to write elementrary business related programs in COBOL as well as the control statements necessary to run the problems on the computer. Flowcharts will be prepared by the student.

Prerequisite: EDPM 134.

EDPM 215 The student will be able to apply advanced technique of COBOL programming to extensive problems selected by the student. Exercises will include flowcharting, programming, preparation of OS control statements, and documentation.

Prerequisite: EDPM 214.

Washington Technical Institute

ASSEMBLY LANGUAGE PROGRAMMING I, II (EDPM 134, 135)

Three credits, one quarter each.

EDPM 134 The student will be able to write programs using the basic instruction set of the computer as well as to prepare DOS control statements and run his programs on the computer.

Prerequisite: EDPM 100

EDPM 135 The student will write programs using the full instruction set and multiple media. Assigned problems will extend the skill of the student and will include exercises in flowcharting, programming and control statement coding.

Prerequisite: EDPM 134.

Washington Technical Institute

COMPUTER PROGRAMMING I, II (NS 251, 252)

Three credits, one quarter each.

NS 251 This course will introduce assembly and machine level software concepts and applications; also, instructing sets, addressing techniques, input-output programs, data representations, and logic. Students will complete several projects illustrating the use of these concepts on a scientific computer designed for use in teaching.

Prerequisite: NS 201 and NM 110.

NS 252 This course is a continuation of NS 251.

Prerequisite: NS 251.

Federal City College

COMPUTER PROGRAMMING I, COBOL (COMMON BUSINESS ORIENTED LANGUAGE)

Non-credit, one semester.

This course in COBOL is for third generation computers. Emphasis is placed on the organization of a COBOL Program, the Structure of the Language, and the Concepts of Data Organization. Students should have completed or be enrolled concurrently in Introduction to Computer Programming or an equivalent course. This course is a prerequisite for Computer Programming II, COBOL.

Arlington Public Schools

COMPUTER PROGRAMMING I-A, I-B (ED 687, 688)

Non-credit, one semester each.

ED 687	This course covers basic concepts of System 360 Assembly Language Coding for business applications. Prerequisite: Introduction to Data Processing or equivalent training or experience.
ED 688	This course is primarily a workshop course. Basic business application programs will be written and run on a S/360 Model 40 computer and returned to class for debugging.

Fairfax County Public Schools

COMPUTER PROGRAMMING (ADVANCED COBOL) (DAPR 256)

Three credits, one quarter.

The student will experience programming a Disc-Operating System environment. In addition to learning the characteristics of DOS, the student will use Job Control language, add and delete files, use utility programs and analyze error messages making necessary corrections.

Prerequisite: DAPR 147.

Northern Virginia Community College

COMPUTER PROGRAMMING (ASSEMBLER) (DAPR 269)

Four credits, one quarter.

This course includes the study and development of a manufacturer's assembly language. The student will write and debug programs in an assembler language, and be capable of employing this language in a total programming system. The principles of debugging and core-dump reading will gain emphasis.

Prerequisite: DAPR 144.

Northern Virginia Community College

COMPUTER PROGRAMMING (COBOL) (DAPR 147)

Three credits, one quarter.

The student will gain experience in using program techniques with a high level language. Students will be required to program, debug, and test specified business oriented problems using COBOL.

Prerequisite: DAPR 144.

Northern Virginia Community College

COMPUTER PROGRAMMING (COBOL) (DAPR 156)

Four credits, one semester.

This course will contain functions and capabilities of the electronic digital computer and the tools and raw material necessary for a programmer. Program drills, exercises, and case studies are included to bridge the gap from the theoretical to the real world of data processing.

Prerequisite: DAPR 153, or equivalent, with a grade of "C" or better.

Prince George's Community College

COBOL PROGRAMMING I (INTRODUCTION)

Non-credit, one semester.

This course will include the basic instruction in writing computer programs in COBOL (Common Business Oriented Language). It includes the concept of compilers, examples of COBOL use in business-type applications, structure of the COBOL language and use of COBOL reference manuals. A selection of basic COBOL entries for the description of data files, records and items will be presented and demonstrated along with basic forms of the most commonly used procedural statements.

Prerequisite: Introduction to Automatic Data Processing or at the discretion of the instructor.

Washington Saturday College

COBOL PROGRAMMING II (ADVANCED)

Non-credit, one semester.

This course will concern itself with details not covered in COBOL Programming I (Introduction). The course will include optional entry formats, less common procedure statements such as those involved in processing non-sequential files, and compiling and executing COBOL programs on a computer.

Prerequisite: COBOL Programming I (Introduction).

Washington Saturday College

COMPUTER PROGRAMMING (COMPUTER CONCEPTS I, II) (DAPR 144, 145)

Three credits, one quarter each.

DAPR 144 The student will learn program techniques and the various characteristics of computers. Practical experience is applied in programming a series of problems in machine, assembler, or manufacturer's higher level language. The course objective is to provide a proper foundation for materials in subsequent courses rather than providing specific skills in any computer language.

Prerequisite: DAPR 106 or equivalent.

DAPR 145 This course is a continuation of the basic programming course DAPR 144. It will provide continued foundation for subsequent data processing courses, and includes symbolic programming techniques, card systems, sequential access storage devices, random access storage devices, time-sharing, remote job entry, and data communications.

Prerequisite: DAPR 144.

Northern Virginia Community College

COMPUTER PROGRAMMING FOR BUSINESS I, II, III, AND IV (BC 203, 205, 206, 306)

Four credits, one quarter each.

The primary purpose is to provide the student with fundamentals in a high level programming language. These courses are the basis for further advanced work in the Computer Science Management field. Emphasis is placed on programming and applications pertaining to problem solving. Each student is required to keypunch, program and debug his programs. The student prepares flowcharts and layouts to document the problem solution. The overall intent is to give the student some facility to use computers more effectively with procedure and problem oriented languages.

Prerequisite: For Course I, BC–104; for Course II, BC–203; for Course III, and IV, BC–205.

Federal City College

COMPUTER PROGRAMMING: FORTRAN (DAPR 259)

Four credits, one semester.

The programmer will learn to code a mathematical or scientific problem in terms closely resembling those used in stating the problem mathematically.

Prerequisite: DAPR 156 or equivalent.

Prince George's Community College

FORTRAN PROGRAMMING I (INTRODUCTION)

Non-credit, one semester.

The course will include basic instruction in writing computer programs in FORTRAN (Formula Translation). It includes the fundamentals of Fortran computations (e.g. constants, variables, input and output, etc.), language elements available for making transfers of control in other than sequential order, use of subscripted variables in order to handle large arrays of related data, and the use of the DO statement to repeatedly execute a section of a program.

Prerequisite: High school algebra or at the discretion of the instructor.

Washington Saturday College

FORTRAN PROGRAMMING II (ADVANCED)

Non-credit, one semester.

This course covers material not discussed in FORTRAN I such as double precision, complex and logical variables, extension of the students' command of input and output techniques, and the use of functions and specification statements to make maximum use of the computer in support of the programmer.

Prerequisite: FORTRAN Programming I (Introduction).

Washington Saturday College

COMPUTER PROGRAMMING (FORTRAN) (DAPR 266)

Four credits, one quarter.

The business applications of FORTRAN will include input/output, floating point arithmetic, loop control, and functions.

Prerequisite: DAPR 144.

Northern Virginia Community College

COMPUTER PROGRAMMING: OVERVIEW (3-345)

Three credits, one semester.

This course will include overview of computer programming, stressing computer characteristics and applications, flow charting, input-output computer communication; use of symbolic and problem oriented languages, and programming techniques. The course is designed to give the student understanding of these subjects and to tie together loose ends of more specific courses, such as Autocoder, Cobol, Fortran.

Prerequisites: For the novice and those with other programming courses.

United States Department of Agriculture

COMPUTER PROGRAMMING (P/L 1) (DAPR 268)

Four credits, one quarter.

The course includes study and development of programming capability in the IBM System 360 computer language P/L 1. It will provide student capability to program in this language. The course includes relative advantages and disadvantages of this higher level language in installations using medium scale and large scale computer systems and continuation of the study of magnetic tape and random access programming.

Prerequisite: DAPR 144.

Northern Virginia Community College

COMPUTER PROGRAMMING (RPC) (DAPR 267)

Four credits, one quarter.

This course includes the study and development of programming capabilities in the business computer language Report Program Generator (RPG). Items pertained to program logic, block diagramming, coding techniques, documentation, advantages and disadvantages of RPG as a high-level language in small and medium scale installations. Students will gain "hands-on" experience in the computing center.

Prerequisite: DAPR 144.

Northern Virginia Community College

FORTRAN

Non-credit, one semester.

Fortran is a computer "language", rapidly growing in usage, which simplifies the application of digital computers to the problems of numerical manipulation. Students enrolling for this course should have some general familiarity with electronic data processing and should have an adequate grasp of high school level algebra, but no specialized programming ability or experience is required.

Arlington Public Schools

FORTRAN PROGRAMMING (ED 693)

Non-credit, one semester.

This course includes basic concepts of computer programming using FORTRAN; writing and debugging in FORTRAN; language not confined to specific machine. Emphasis is placed on scientific or research applications to problem solving. Prerequisite: Introduction to Data Processing or equivalent.

Fairfax County Public Schools

INTRODUCTION TO COMPUTER LANGUAGES AND SYSTEMS (CMSC 120)

Three credits, one semester.

This will include organization and characteristics of computers; procedure oriented and assembly languages; representation of data, characters and instructions; introduction to logic design and systems organization; macro definition and generation; program segmentation and linkage. Extensive use will be applied to the computer to complete projects illustrating programming techniques and machine structure.

Prerequisite: Math 022 or equivalent.

University College

INTRODUCTION TO COMPUTER PROGRAMMING

Non-credit, one semester.

Emphasis is placed on the computer components and capabilities, the concept of charting techniques (communications and documentation) and problem solving, number systems, and data representation. This course is an excellent preparation for formal program training.

Arlington Public Schools

INTRODUCTION TO COMPUTER SCIENCE (NS 231)

Four credits, one quarter.

This course covers the formulation of algorithms in the FORTRAN IV language to solve scientific problems. Introductory concepts will be studied in computer organizations, errors and information representations.

Prerequisite: NM 110.

Federal City College

INTRODUCTION TO FORTRAN (DAPR 270)

Four credits, one quarter.

This course is designed for non-data processing majors. It will acquaint students with current version of a scientific programming system; covering input/output, floating point arithmetic, looping control, functions.

Prerequisite: Math 16 or equivalent.

Northern Virginia Community College

INTRODUCTION TO SYSTEMS 360 PROGRAMMING LANGUAGE (DAPR 257)

Three credits, one quarter.

This course in programming languages is designed to provide full access to both computer and operating system. The language applies to both business and scientific problems and independence of the machine.

Prerequisite: DAPR 106 or equivalent.

Northern Virginia Community College

LANGUAGE AND STRUCTURE OF COMPUTERS (CMSC 100)

Three credits, one semester.

This course includes the logical basis of computer structure, machine representation of numbers and characters, flow of control, instruction codes, arithmetic and logical operations, indexing and indirect addressing, input-output, push-down stacks, symbolic representation of programs and assembly systems, subroutine linkage, macros, interpretive systems, and recent advances in computer organization. Several computer projects are included to illustrate basic concepts.

Prerequisite: CMSC 012 or CMSC 020 or equivalent.

University College

PRINCIPLES OF MACHINE PROGRAMMING I (4–111)

Three credits, one semester.

This course is designed to follow Basic Concepts of Data Processing. Essential elements are of programming using machine symbolic language; principles of machine programming system; review of flowcharting method of problem analysis; use of computer instruction set; input/output methods and systems.

Prerequisite: Basic Concepts of Data Processing.

United States Department of Agriculture Graduate School

PRINCIPLES OF MACHINE PROGRAMMING II (4–119)

Three credits, one semester.

This course is designed to follow Principles of Machine Programming I; machine operation and systems aids; fundamentals of at least two procedure or compiler languages, i.e., FORTRAN and COBOL.

Prerequisite: Basic Concepts of Data Processing. Principles of Machine Programming I desirable.

United States Department of Agriculture Graduate School

PROGRAMMING I (DP–040)

Non-credit, one semester.

This course introduces the basic principles of the data processing system.

Prince George's County Public Schools

PROGRAMMING LANGUAGE I (CS 211)

Three credits, one semester.

The student will learn a multi-purpose programming language that can be used by both commercial and scientific programmers to handle all their applications. Course may be taken, with consent, as an elective or as a substitute for an advanced programming course.

Prerequisite: CS 120 or consent of the instructor.

Montgomery College

SCIENTIFIC PROGRAMMING I, II (DAPR 274–275)

Three credits, one quarter each.

This course will include the study and development of programming capability in the scientific computer language FORTRAN. It will provide student capability to program in this language; including the relative advantages and disadvantages of the large-scale computer system and continuation of the study of magnetic tape and random access programming.

Prerequisite: Two years of computer programming experience and suitable course background.

Northern Virginia Community College

STRUCTURE OF PROGRAMMING LANGUAGES (CMSC 140)

Three credits, one semester.

Formal definition of languages including specification of syntax and semantics will be taught. Other items included are syntactic structure and semantics of simple statements including precedence, infix, prefix, and postfix notation. Global structure and semantics of algorithmic languages including declarations and storage allocation, grouping of statements and biding time of constituents, subroutines, coroutines, tasks, parameters; list processing and data description languages will be added.

Prerequisite: CMSC 100 or equivalent.

University College

SYSTEM PROGRAMMING I, II (NS 301, 302)

Three credits, one quarter each.

NS 301 This course is an introduction to operating systems concepts, translator programs, device handlers, interrupt systems, priority concepts, and system macros; several student problems will be assigned to illustrate these concepts.

Prerequisite: NS 252.

NS 302 This course is a continuation of NS 301.

Prerequisite: NS 301.

Federal City College

ADVANCE PROGRAMMING TECHNIQUES (EDPM 246)

Three credits, one quarter.

The student will apply advanced programming techniques to such areas as real-time, time sharing, mass storage utilization, and control systems.

Exercises will be selected from those used in local business, District, and Federal agencies. Problems include accepting written and oral instructions, flowcharting, programming, documentation, and presentation of the results.

Prerequisites: EDPM 135 or 215.

Washington Technical Institute

DENTAL SCIENCE

DENTAL MATERIALS AND DENTAL LABORATORY PROCEDURES (DA 103)

Three credits, one semester.

This course will study the composition and source of materials employed in dentistry and their behavior under various treatments. Through lectures, demonstrations and laboratory exercises the students learn to identify and prepare these materials for chairside, and the routine laboratory procedures in general dentistry and in the dental specialties. They also learn how to prepare cases for commercial laboratories.

Montgomery College

DRAFTING

FREEHAND DRAWING (ARCH E13)

Three credits, one semester.

This is a sequence of basic drawing problems to develop control and perception in the use of line.

University of Virginia School of General Studies

DRAWING AND SKETCHING

Non-credit, one semester.

The student will learn the principles of drawing and sketching.

Prince George's County High Schools

DRAWING AND SKETCHING (ADV.)

Non-credit, one semester.

This is a continuation of "Drawing & Sketching."

Prince George's County High Schools

DRAWING (AR 101, 102)

Three credits, one semester each.

Analysis and exploration of basic drawing techniques will be covered in this course. The media used will include pencil, charcoal, conte crayon, pen and ink, and brush and paint.

AR 101 Emphasis is placed on problems involved in representational and abstract visual interpretation of natural and man-made forms.

AR 102 Emphasis is placed on problems involved in representational and abstract visual interpretation of the human figure and a separate study and in relation to its environment.

AR 101 offered first semester; AR 102 offered second semester.

Prerequisite: AR 101 for AR 102.

Montgomery College

DRAWING I (ART 103)

Three credits, one semester.

This is a fundamental course in the practice of drawing with various media. The objectives are to develop artistic discrimination and the ability to draw.

Prince George's Community College

INTRODUCTION TO DRAFTING

Non-credit, one semester.

This is an introductory course to the basic fundamentals of drafting.

Arlington Public Schools

TECHNICAL DRAFTING (DRFT III)

Two credits, one quarter.

The student will be introduced to the techniques and instruments required for success as a draftsman in industry. Use of instruments, lettering, simple descriptive and analytic geometry principles as applied to drafting and freehand sketching, basic principles of orthographic projection in the preparation of simple drawings are added drafting techniques taught.

Northern Virginia Community College

DRAFTING AND MECHANICAL DRAWING

Non-credit, one semester.

This is a basic course for students interested in drafting and mechanical drawing.

Prince George's County Public Schools

MECHANICAL DRAWING AND PERSPECTIVE (ADVD 116)

Three credits, one quarter.

The student will acquire the fundamental techniques of mechanical drawing as requisite to technical illustrating. The student will learn the use of instruments for making charts, graphs and maps. Further the student will be introduced to the basic drafting skills and will learn one, two and three point exterior and interior perspective involving background, etc. as it applies to illustration and other commercial art areas.

Washington Technical Institute

MECHANICAL DRAWING I, II (DRTC 151, 152)

Two credits, one semester each.

DRTC 151 This introductory course is designed for engineering-related technology students. The course will pertain to theory and practice include use and care of drafting instruments; sketching; orthographic, isometric, and oblique projections; dimensioning; sections; lettering; geometric construction; and auxiliary views.

DRTC 152 Course material will include the rotation or revolution of views; threads, fasteners, and springs; detail drawings; assembly drawings; pattern layouts; tracing and reproduction.

Prerequisite: DRTC 151, Math 161, completed or concurrent.

Prince George's Community College

DESCRIPTIVE GEOMETRY (ENGR 103)

Three credits, one quarter.

The student will be introduced to the geometry of engineering drawing, problems of point, line, and plane, including intersections and developments.

Prerequisite: ENGR 102 (Engineering Graphics II).

Washington Technical Institute

DESCRIPTIVE GEOMETRY (DRTC 154)

Three credits, one semester.

Theory and practical applications will be in location of points and lines; true length; slope and bearing of a line; intersecting lines; points of lines and planes; planes as an edge and true size; intersection of lines and planes; intersection of two planes;

dihedral angles; parallel lines; perpendicular lines, and revolution and intersection of surfaces.

Prerequisite: DRTC 151, Math 161.

Prince George's Community College

DRAFTING—ARCHITECTURAL AND MECHANICAL

Non-credit, one semester.

The student will receive instruction in both architectural and mechanical drafting.

Public Schools of District of Columbia

DRAFTING

Non-credit, one semester.

Architectural drafting principles and techniques necessary for beginning employment as a draftsman will be emphasized. The use of photography and micro-filming in drafting will be featured.

Arlington Public Schools

ARCHITECTURAL DRAFTING I, II (DRTC 251, 252)

Two credits, one semester each.

DRTC 251 This course introduces the student to the terminology, symbols and convections used in detailing construction components. Theory and laboratory emphasizes residential construction with topics on site plan; floor plan; elevations; sections; details; and schedules used on working drawings.

Prerequisite: DRTC 151, CITC 151, completed and concurrent.

DRTC 252 Plans and details for mechanical equipment such as air conditioning, plumbing, and electrical systems on a coordinated basis with the structural and architectural components of the building designed in Architectural Drafting I will be studied.

Prerequisite: DRTC 251, Math 162, completed or concurrent.

Prince George's Community College

TECHNICAL DRAFTING II, III, IV (DRFT 112, 113, 114)

Two credits, one quarter each.

DRFT 112 This course will cover sections and conventions, threads and fasteners, pictorial drawings, auxiliaries and revolutions.

Prerequisite: DRFT 111 or equivalent.

DRFT 113 Assembly and detail drawings, working from the simple to the complex will be studied in this course.

Prerequisite: DRFT 112 or equivalent.

DRFT 114 This course will be a continuation of DRFT 113 with emphasis on production standards.

Northern Virginia Community College

ADVANCED TECHNICAL DRAFTING V, VI, VII, (DRFT 211, 212, 213)

Three credits, one quarter each.

DRFT 211 Drafting machines will be used with emphasis on the knowledge and skill required for typical industrial drawing. Electrical and electronic symbols and drawings, piping, complicated gearing drawings, sections, and layout; skill in lettering of all types will be included.

Prerequisite: DRFT 113.

DRFT 212 Electronic and electromechanical drawings, sheet metal fabrication, radii, fillets, and tolerances; use of ink in lettering and ruling will be studied in this course.

Prerequisite: DRFT 211.

DRFT 213 Emphasis is placed on design drafting in all aspects as a means of communication.

Prerequisite: DRFT 212.

Northern Virginia Community College

ELECTRONICS DRAFTING (DRFT 256)

Two credits, one quarter.

This course will cover the fundamental principles, practices and methods of presenting electromechanical information through the graphic language. Principles of projection, fastening, materials and finishes, chassis design and fabrication, electronic symbology, diagrammatic drawings, printed circuit drawings and checking of electronic drawings are also included.

Northern Virginia Community College

ELECTRONICS DRAFTING (ENGR 106)

Three credits, one quarter.

The student will learn the principles, practices, and methods of presenting electromechanical information through graphic language.

Prerequisite: ENGR 102.

Washington Technical Institute

ELECTRICAL AND ELECTRONICS DRAFTING (ELTC 268)

Two credits, one semester.

Emphasis is placed on the fundamentals of drawing electrical circuits using proper terms, symbols, and standards, with accent on industrial drafting practices used in design and construction of electronic circuits and equipment. Topics will include projection, fastener, materials and finishes, chassis design and fabrication, diagrammatic drawing, and printed circuit drawings.

Prerequisite: DRTC 151, ELTC 255, completed or concurrent; Math 261, completed or concurrent.

Prince George's Community College

CIVIL TECHNOLOGY DRAFTING (DRTC 253)

Two credits, one semester.

Drafting room procedures and methods will be used in architectural drawing and in graphical presentation of steel and concrete structures.

Prince George's Community College

DRAFTING FOR URBAN PLANNING I, II (ENGR 107, 108)

Three credits, one quarter each.

ENGR 107	The student will learn techniques of graphic representation for Urban Planning, preparation of charts and graphs, and use maps and related materials.
ENGR 108	The student will prepare usual aids and printed and graphic materials for formal presentations. Prerequisite: ENGR 107.

Washington Technical Institute

BLUEPRINT READING

Non-credit, one semester.

Evening classes in blueprint reading is offered at several of the county high schools.

Prince George's County Public Schools

BLUEPRINT READING I, II, III (DRFT 171, 172, 173)

Two credits, one quarter each.

DRFT 171	This course will emphasize purposes of blueprints, designing of the products and its production; review and application of basic principles, visualization, orthographic projection, detail of drafting shop process and terminology, assembly drawings and exploded views.
DRFT 172	Attention is directed toward dimensioning, review and application techniques, changes and corrections, classes of fits, tolerances and allowances, sections and convention in blueprint readings, auxiliary views, pictorial drawings, simplified drafting procedures. Prerequisite: DRFT 171.
DRFT 173	Industrial prints, production drawings, operation sheets, tool drawings, assembly drawings, and detail prints will be included in this course. Prerequisite: DRFT 172.

Northern Virginia Community College

ECOLOGY

ECOLOGY (BI 207)

Four credits, one semester.

Study of biomes, communities, range, distribution of species, ecosystems and succession; modern approaches to pollution, conservation, land usage and zoning are covered in this course.

Prerequisite: Four hours of biological sciences or permission of the instructor.

Montgomery College

GENERAL ECOLOGY (CIOL 267)

Three credits, one quarter.

This course includes a study of the interrelationships between organisms and the natural and cultural environments with emphasis on human influence on ecological structure; survey of populations, communities and ecosystems.

Prerequisite: General biology or departmental permission.

Northern Virginia Community College

GENERAL ECOLOGY (NB 206)

Four credits, one quarter.

Principles governing the survival of plants and animals in natural environment are discussed. The organization of species population and communities is discussed in the light of modern evolutionary theories.

Prerequisites: Biological Science I, II, III.

Federal City College

HUMAN ECOLOGY (BIOL 100)

Three credits, one semester.

Ecological principles and their relevance to human affairs including basic principles of biology which are essential to an understanding of environmental problems.

Prince George's Community College

ENVIRONMENTAL PROBLEMS (SS-110)

Three credits, one trimester.
A comprehensive ecological survey of the critical environmental problems (air pollution, water pollution, solid waste disposal, consumer hazards, etc.) that confront the United States; current action to solve these problems; prospects of succeeding in achieving quality environment.

Southeastern University

A SURVEY OF ENVIRONMENTAL POLLUTANTS (121)

Three credits, one quarter.
This course is for students who do not plan to major in the sciences. The source and modes of action of various environmental poisons such as lead, asbestos, mercury, and carbon monoxide are presented and various tests for them are investigated. Chemical principles are presented as needed.

Federal City College

POLLUTION

Non-credit, one semester.
Study of a new subject which is increasingly of concern to all citizens.

Prince George's County High Schools

ENVIRONMENTAL ACTION

Non-credit, one semester.
This is an introductory course in methods to implement action against environmental threats.

Prince George's County High Schools

INTRODUCTION TO ECOLOGY (1-133)

One credit, one semester.

This course will include a survey of fundamental principles of ecology.

United States Department of Agriculture Graduate School

ECOLOGIC COMMUNITY (1-173)

Three credits, one semester.

This course will include a survey of basic concepts of ecology.

United States Department of Agriculture Graduate School

ECONOMICS

PRINCIPLES OF ECONOMICS (ECON 1)

Three credits, one semester.

This is an introductory course in economics.

University of Virginia School of General Studies

PRINCIPLES OF ECONOMICS (ECON 2)

Three credits, one semester.

This is a continuation of ECON 1.

Prerequisite: Econ 1.

University of Virginia School of General Studies

PRINCIPLES OF ECONOMICS

Non-credit, one semester.

An introductory course designed for those students with no previous grounding in economics. Topics covered include elementary price theory, introduction to the American economic system, national income accounts, and basic macroeconomic theory.

Washington Saturday College

BASIC ECONOMICS (EC 105)

Three credits, one semester.

This course is a survey of the price system, market structures, modern business, labor, agriculture, the monetary system, national income, economic development, and international trade.

Montgomery College

PRINCIPLES OF ECONOMICS I, II, III (ECON 211, 212, 213)

Three credits, one quarter each.

The principles of economics and the bearing of these principles on present American conditions, structural and functional aspects of the economy will be discussed. Analysis, problems and issues relating to organization of business, labor and government institutions and economic stability and growth are studied. Measurements of economic activity and private enterprise, economic growth and stabilization policies, monetary and fiscal policy and international economic relationships, and alternative economic systems are also included.

Northern Virginia Community College

PRINCIPLES OF ECONOMICS I, II (ECON 214, 215)

Five credits, one quarter (ECON 214).
Four credits, one quarter (ECON 215).

These introductory courses covering the structure, organization, and operation of the United States economy, analysis, problems, and issues relating to the organization of business, labor, and government institutions and their economic stability and growth. Measurements of economic activity will be studied. Private enterprise, economic growth and stabilization policies, monetary and fiscal policy, and international economic relationships, alternative economic systems are also covered in this course.

Northern Virginia Community College

PRINCIPLES OF ECONOMICS I, II (ECON 101, 102)

Three credits, one trimester each.

EC 101 This course will acquaint the student with background information concerning the functioning and central problems of present day economic society, its institutions and practices. Emphasis is placed on macroeconomics. The introductory course provides significant economic principles and facts relating to business, labor, the role of Government, national income and its determination, busines cycles, money and banking.

EC 102 This course is a continuation of EC 101. It centers on micro-economics-pricing of national output and the factors of production, international trade and finance, economic growth and development, and alternative economic systems.

Prerequisite: EC 101.

Southeastern University

ECONOMICS I (BUAD 176)

Three credits, one quarter.

The student will be introduced to concepts relating to National Income Accounting, Gross National Product and its components, Employment Theory, Monetary and Fiscal Policies, their tools and implementation, Multiplier and Acceleration Principles, their calculations, and overall concepts dealing with aggregate or Macro-economics.

Washington Technical Institute

ECONOMICS II, III (BUAD 274, 275)

Three credits, one quarter each.

BUAD 274 The student will analyze the economy from the Micro-economic or individual productive unit concept involving an analysis of Supply and Demand schedules, curves, and graphs. Elasticity, and Market. Structures emphasizing Pure Competition, Pure Monopoly, Monopolistic Competition, and Oligopoly. The student will also be exposed to Cost, Revenue, Product, Utility, and Indifference Curve Analysis.

Prerequisite: BUAD 176.

BUAD 275 The student will be introduced to International Economics, History of International Trade, tariff, free vs. protected trade concepts, international equilibrium, balance of trade problems, balance of payments problems, and Business Cycles Theory. Problems of Developing Countries, and Comparative Economic Systems will be covered.

Prerequisite: BUAD 274.

Washington Technical Institute

PRINCIPLES OF ECONOMICS (SE 201, 202, 203)

Four credits, one quarter each.

SE 201 Introduces analytical approaches which are used in the determination of the level of national income. This course analyses the causes of inflation, unemployment, full employment, and the policy alternatives for affecting macro-economic changes.

Prerequisite: NM 102 or concurrent enrollment in NM 102.

SE 202 This course deals with the theory of how prices are determined in a market economy, how sales respond to changes in prices; how costs relate to revenue, and the resultant profit or loss, and the various theoretical market structures. The gap between theory and practice is emphasized, pointing out the legal and social requirements of a market economy.

This course deals with problems and policies related to economic development, particularly these of the black community. It discusses black economic integration and separation and black capitalism. Also, the course looks at economic development in overseas areas.

Federal City College

AMERICAN ECONOMICS (ECON 60)

Three credits, one quarter.

A survey of the American economic system designed to familiarize the student entering an occupation with the history, general principles, and basic policies of the American economic system.

Northern Virginia Community College

AMERICAN ECONOMICS (ECON 160)

Three credits, one quarter.

A survey of the history, principles, and policies of the American economic system is studied. Some comparison with alternative economic systems will be discussed.

Northern Virginia Community College

ECONOMIC HISTORY OF THE UNITED STATES (EC–202)

Three credits, one trimester.

An eclectic survey of trends and developments in agriculture, business and industry, labor, commerce, money, banking and government and their institutional framework from the colonial period to the present. Emphasis is placed on various factors responsible for economic growth and conflicting assessments of their influence.

Prerequisite EC–101.

Southeastern University

ECONOMICS FOR CONSUMERS (SE 220)

Four credits, one quarter.

The course deals with the problems of household financial decision making, e.g., housing, credit usage, purchasing insurance etc. Also, the course looks at the role of the consumer in the economy examines ways in which the average consumer can increase his welfare by more rational decision making in the marketplace.

Federal City College

ELECTRICITY, CURRENTS AND CONTROLS

BASIC ELECTRICITY—DIRECT CURRENT (ET 105)

Three credits, one semester.

This course is for students not enrolled in the electronic technology curriculum. It is an introduction to the nature of electricity, electrical terminology, definitions, and laws. Also included will be circuit analysis and electrical problems solutions; instruments, magnetism, and electromagnetic induction; and the generator and motor.

Prerequisite: MA 10 or equivalent. (Takoma Park only.)

Montgomery College

BASIC ELECTRICITY—ALTERNATING CURRENT (ET 106)

Three credits, one semester.

This course is for students not enrolled in the electronic technology curriculum. It will cover characteristics of alternating current; inductance, capacitance, reactance, impedance, power, and power factor; analysis of AC circuits series and parallel LCR circuits; and three phase power, an introduction to AC machinery and transformers.

Prerequisite: ET 105 or equivalent. (Takoma Park only.)

Montgomery College

FUNDAMENTALS OF DIRECT CURRENT (ELEC 114)

Four credits, one quarter.

Math 111 or Math 121 must have been taken previously or must be taken concurrently. This is a study of current flow and direct current circuits. The course presents work with magnetic circuits and utilizes mathematical tools as they are developed in the mathematics course.

Northern Virginia Community College

FUNDAMENTALS OF ALTERNATING CURRENT (ELEC 115)

Four credits, one quarter.

Prerequisite ELEC 114, MATH 112 or MATH 122 must have been taken previously or must be taken concurrently. This is the study of time varying currents. The student will use complex numbers and vector concepts in dealing with A.C. impedances.

Northern Virginia Community College

INTRODUCTION TO TUBES AND TRANSISTORS (ELEC 120)

Four credits, one quarter.

This is a course concerned with how electronic devices work and the characteristics of these devices. Both tube and solid state device characteristics are covered. This course utilizes the mathematical tools as they become available and the ideas of electronic flow and circuit analysis as they are developed in the fundamentals of electricity course.

Prerequisites: ELEC 114 and MATH 111 or MATH 121 must have been taken previously or must be taken concurrently.

Northern Virginia Community College

INSTRUMENTS AND MEASUREMENTS (ELEC 276)

Four credits, one quarter.

This is a study of basic circuits in electronic measurements and application of these circuits in test instruments such as oscilloscopes, vacuum tube voltmeters and bridges. Further study is concerned with the accuracy of measurements, how instruments work, proper use of instruments and calibration technique.

Prerequisite: ELEC 116 and ELEC 126.

Northern Virginia Community College

CONTROL CIRCUITS (ELEC 260)

Four credits, one quarter.

The principles and applications of electrical controllers are covered in this course, which serves as an introduction to automation. Devices for differentiation, integration and proportioning are studied in detail. Hardware and circuitry for AC and DC industrial control devices, including contactors, starters, speed controllers, time delays, limit switches and pilot devices. Application in the control of industrial equipment-motors, servo units and motor-driven actuators is also included.

Prerequisite: ELEC 227.

Northern Virginia Community College

COMMUNICATIONS I, II, (241, 242)

Four credits, one quarter each.

ELEC 241 This is a study of modulation and power in modulated waves; sinusoidal oscillations and oscillators, RF amplifiers and detectors and AM receivers.

Prerequisite: ELEC 125.

Northern Virginia Community College

ELEC 242 This is a study of transmitters and receivers. Topics included are FM receivers, RF power amplification, AM SSB and FM transmitters, and an introduction to transmission lines and antennas.

Prerequisite: ELEC 241.

Northern Virginia Community College

COMMUNICATIONS SYSTEMS (ELEC 243)

Four credits, one quarter.

This is a study of microwave systems. Topics included are microwave tubes, waveguides, antennas and measurements at microwave frequencies. An introduction to radar and television systems is presented.

Prerequisite: ELEC 242.

Northern Virginia Community College

ELECTRONICS AND RELATED ELECTRICITY COURSES

DC FUNDAMENTALS (ELTC 151)

Four credits, one semester each.

ELTC 151	This course includes concepts of electricity including a review of the physics of electrical currents; concept of conductors, insulators and resistors; and practical work in industrial electronics assembly techniques, including component identification.
	Prerequisite: Math 161, completed or concurrent.
ELTC 152	Alternating current phenomena; practical experiments and use of sophisticated laboratory quality test equipment are provided in this course.
	Prerequisite: Math 162, completed or concurrent, and ELTC 151.

Prince George's Community College

INTRODUCTION TO CIRCUIT ANALYSIS (ELEC 116)

Four credits, one quarter.

A course emphasizing AC circuit theory and both A and DC network theorem and provides a continuation of the background information needed to analyze networks with both active and passive elements present.

Prerequisite: ELEC 115, Math 113, or Math 122.

Northern Virginia Community College

ELECTRICITY (MATH)

Non-credit, one semester.

The student will learn mathematics applicable to electricity.

Prince George's County Public Schools

BASIC ELECTRICITY (ELTC 153)

Three credits, one semester.

This course covers electrical circuitry and equipment for those who are not majoring in the electrical technology or electronics technology curricula. Also includes electricity and magnetism, basic circuits, alternating and direct currents will be covered.

Prerequisite: Math 161 and 162, completed or concurrent.

Prince George's Community College

BASIC ELECTRICITY I, II, III (ELEC 101, 102, 103)

Four credits, one quarter each.

ELEC 101	The student will study the fundamentals of direct current, current flow, direct current circuits, and magnetic circuits. (Math 111 must be taken concurrently.)
ELEC 102	The student will learn the fundamentals of alternating current, emphasizing the study of time varying currents. The students will use complex number vectors concepts in dealing with AC impedances. (MATH 112 must be taken concurrently.) Prerequisite: ELEC 101.
ELEC 103	The student will acquire a working knowledge of Circuit A analysis. The course will emphasize AC circuit theory and both AC and DC network theorems. The student will be provided background information needed to analyze networks with both active and passive elements present. (MATH 113 must be taken concurrently.) Prerequisite: ELEC 102.

Washington Technical Institute

D.C. MACHINES AND CONTROLS (ELEC 116)

Four credits, one quarter.

The student will learn the principles of shunt, series, and compound motors and the common variations of D.C. generators. The control of D.C. machines is treated from the theoretical standpoint and is fully covered by laboratory experiences using a wide range of D.C. machines, controls, and measuring instruments.

Washington Technical Institute

ELECTRICITY I (THEORY)

Non-credit, one semester.

Evening classes in electricity basic theory are offered in several of the county high schools.

Prince George's County Public Schools

A.C. CIRCUITS (ELEC 157)

Three credits, one quarter.

The student will study capacitive and inductive reactance, impedance, power factor and how it is controlled, true and apparent power, and the measurement of voltage, current, and polyphase circuits.

Washington Technical Institute

PULSE AND SWITCHING CIRCUITS (ELEC 227)

Three credits, one quarter.

This course will cover linear and non-linear wave shaping providing base for further study in the area of computers and automatic controls.

Prerequisite: ELEC 116.

Northern Virginia Community College

AIRCRAFT INSTRUMENTATION (ELEC 207)

Four credits, one quarter.

The student will learn the theory, operation, and maintenance of electronic instruments which make flight and navigation safe and reliable.

Washington Technical Institute

ELECTRICITY—ELECTRONICS III (EDIN 108)

Three credits, one semester.

An advanced course designed to provide more extensive knowledge in electricity or electronics including the advanced theory and application of semi-conductors and the principles of the storage and transmission of electronically coded information.

Prerequisite: EDIN 028 or equivalent.

University College

ELECTRICAL CONTROL CIRCUITS (ELTC 255)

Four credits, one semester.

This course will include principles and applications of electrical controllers as an introduction to automation; devices for differentiation, integration and proportioning; hardware and circuitry for AC and DC industrial control devices; control of industrial equipment-motors, servo units and motor-driven actuators.

Prerequisite: ELTC 251, Math 163, completed or concurrent.

Prince George's Community College

DISTRIBUTION SYSTEMS (ELTC 257)

Four credits, one semester.

Design, operation and technical details of modern power distribution systems; system load analysis, rates, and power economics are included in this course.

Prerequisite: ELTC 251.

Prince George's Community College

ELECTRONICS (MATH)

Non-credit, one semester.

Evening classes in mathematics for electronics are offered in Prince George's County.

Prince George's County Public Schools

MATH FOR ELECTRONICS (ED 747)

Non-credit, one semester.

This course is designed for students enrolled in electronics or working with electronic theory, circuits and systems. Materials will cover review of algebra, slide rule, powers of 10, equations, simultaneous equations, exponents and radicals, trig functions, tables of functions, solution of right triangles, A.C., vector algebra and logarithms.

Fairfax County Public Schools

BASIC ELECTRONICS (ELTC 155)

Three credits, one semester.

Items of interest in this course are technical concepts of electronic components and circuits; principles of vacuum tubes and transistors; tuned circuits and basic circuits for power supplies, detectors, amplifiers, and oscillators; radio receivers; cathode-ray oscilloscopes; use of basic test devices and measuring instruments.

Prerequisite: ELTC 151 or ELTC 152, ELTC 153, completed or concurrent.

Prince George's Community College

ELECTRONICS I (THEORY)

Non-credit, one semester.

Evening classes in the theory of electronics is offered at several of the county high schools.

Prince George's County Public Schools

SEMI-CONDUCTOR DEVICES (ELTC 157)

Three credits, one semester.

The student will gain knowledge in basic working theory for the commonly utilized solid state devices prevalent in the computer, communications and aerospace research laboratories.

Prerequisite: Math 161 and 162, completed or concurrent; and ELTC 151.

Prince George's Community College

ELECTRICAL MACHINES (ELTC 251)

Four credits, one semester.

This course will cover the theory, construction, maintenance and characteristics of DC and AC motors, generators, and transformers; both single and polyphase units; laboratory includes load tests on selected equipment and studying characteristic behavior of these units under varying operating conditions.

Prerequisite: ELTC 151, Math 162.

Prince George's Community College

ELECTRICAL INSTRUMENT AND MEASUREMENTS (ELTC 253)

Three credits, one semester.

The student will study basic indicating instruments through complex integrating devices, both operating principles and the "hardware." Laboratory construction of metering systems for operation, repair, and calibration of measuring instruments; including mathematical analysis used throughout with extensive use of vector algebra and trigonometry will be contained.

Prerequisite: ELTC 152.

Prince George's Community College

INSTRUMENTS AND MEASUREMENTS (ELEC 266)

Three credits, one quarter.

The student will learn the operating principles and proper application of electrical measuring instruments commonly used by the electrical power technician. Emphasis will be placed upon an understanding of inherent instrument accuracy and technical limitations of certain classes of instruments.

Washington Technical Institute

INSTRUMENTATION I, II (ELEC 204, 205)

Four credits, one quarter each.

ELEC 204 The student will learn the basic fundamentals of measurements and measuring devices. The student is provided with a firm foundation in the theory, construction and applications of measuring devices normally encountered in instrumentation.

ELEC 205 The student will study the principles of industrial instruments involved in the measurement and control field. This course is at an intermediate level and is designed to expand the background of the student who will be engaged in the instrument and control industry.

Washington Technical Institute

PROCESS INSTRUMENTATION (ELEC 206)

Four credits, one quarter.

The student will learn the principles and applications of instruments and devices as they are used in manufacturing, including production and quality control. He will develop an appreciation of the accuracy and inherent limitations of typical instruments so that he may use them efficiently and intelligently.

Washington Technical Institute

ELECTRONICS I, II

Non-credit, one semester each.

ELEC I This course is a basic electronics instruction course.

ELEC II This is a continuation of Electronics I.

Arlington Public Schools

ELECTRONICS II (LAB)

Non-credit, one semester.

Evening classes in the continuation of basic electronics is also offered in Prince George's county.

Prince George's County Public Schools

ELECTRONICS ENGINEERING I, II, III (ELEC 201, 202, 203)

Four credits, one quarter each.

ELEC 201	The student will learn the basic concepts of electron and solid-sate physics. Consideration is given to the application of vacuum, gas, and semiconductor diodes and triodes to basic electronic circuits. Prerequisite: ELEC 103.
ELEC 202	The student will study more advanced semiconductor and tube theory. Amplifier operation characteristics and considerations are studied. Laboratory experiments demonstrate the application of vacuum tubes and transistors to various circuits. Prerequisite: ELEC 201.
ELEC 203	The student will apply knowledge gained in ELEC 201 and 202 to complex electronic systems. Laboratory experiments demonstrate the operating characteristics of single-stage and multi-stage circuits. Prerequisite: ELEC 202.

Washington Technical Institute

INDUSTRIAL ELECTRONICS (ELTC 259)

Three credits, one semester.

Application of electronics to control of power equipment; and basic circuits, control elements and hardware of controls are used for acquaintance with circuit applications.

Prerequisite: ELTC 155, ELTC 255, completed or concurrent.

Prince George's Community College

INDUSTRIAL ELECTRONICS (ELEC 233)

Three credits, one quarter.

The student will survey the principles and "building blocks" of industrial controls by analyzing involved control circuits, presenting the principles of operation and application of special electromagnetic and electronic devices and feedback circuits.

Washington Technical Institute

ELECTRONIC CIRCUITS (ELTC 261, 262)

Four credits, one semester each.

ELTC 261	Subcircuit parameters including oscillators and feed back theory; multivibrators; gates; operational amplifiers, modulators and detectors; and integrated circuit devices will be included in this course. Prerequisite: ELTC 152, ELTC 157, Math 163, completed or concurrent.
ELTC 262	Emphasis is placed on electronic block diagrams and development of inter-related circuit applications. Prerequisite: ELTC 261.

Prince George's Community College

INTRODUCTION TO COMPUTERS (ELTC 250)

Four credits, one quarter.

This course is a general introduction to concepts and basic features of electronic computers. Topics included will be fundamentals of internal operations, number systems, digital circuits, boolean algebra, basic logical design techniques, analysis of input-output devices, control and arithmetic units, memory units and limited programming.

Prerequisite: ELEC 227.

Northern Virginia Community College

COMPUTER ELECTRONICS

Non-credit, one semester.

Electro Mechanical Aspects of digital computers will be stressed rather than data processing.

Arlington Public Schools

INTRODUCTION TO COMPUTER CIRCUITS (ELEC 216)

Three credits, one quarter.

The student will learn the basic principles of digital computing systems. The overall organization of typical computers is covered, and typical peripheral equipments are analyzed. Both binary arithematic and Boolean algebra are treated. The fundamentals of magnetic devices are also discussed.

Washington Technical Institute

COMPUTER CIRCUITS AND SYSTEMS (ELTC 264)

Four credits, one semester.

Emphasis is placed on the digital computer systems and their ultimate integration. Programming is discussed to give an understanding of basic utilization of digital systems.

Prerequisite: ELTC 261.

Prince George's Community College

SOLID STATE TECHNOLOGY (ELEC 221)

Three credits, one quarter.

The student will learn the fundamental theory of transistors and other solid-state devices and its verification. Amplifiers, oscillators and other applications using a servisodial wave are analyzed.

Washington Technical Institute

MICRO WAVE TRANSMISSION (ELEC 222)

Three credits, one quarter.

The student will learn the theory and basic components or systems of microwaves and transmission lines including wave guides, coaxial lines, tees, couplers, cavities, filters, antennas, microwave tubes, microwave measurements, and to pulse radar.

Prerequisite: ELEC 221.

Washington Technical Institute

MICROWAVE APPLICATIONS (ELTC 266)

Three credits, one semester.

The student will study microwave system hardware and electromagnetic radiation theory in the microwave region.

Prerequisite: ELTC 261.

Prince George's Community College

RADAR (ELEC 223)

Three credits, one quarter.

The student will be able to use the theory and application of basic radar systems and components with emphasis on pulse radar.

Prerequisite: ELEC 222.

Washington Technical Institute

A.C. MACHINES I, II, III (ELEC 251, 252, 253)

Four credits, one quarter each.

ELEC 251 The student will understand alternator construction, frequency of AC generators, the revolving field, armature windings, coil pitch and pitch factor, distribution factor, regulations, armature voltage drop, and alternator efficiency. Also covered are transformer construction, transformer voltages and general transformer equation, loading, voltage regulation, and efficiency.

ELEC 252 The student will understand induction motor principles, the stator and the rotor slip and rotor speed, rotor current and power, starting and running torque, efficiency, starting methods, and speed control. In addition to this coverage of polyphase induction motors, the student will investigate the operation and applications of the more common types of single phase motors.

ELEC 253 The student will understand synchronous motor construction and operation. Starting methods, loading, and power factor adjustment are covered, as are the synchronous condenser, the dual-purpose synchronous motor and the synchronous-induction motor.

Also covered are single and polyphase converters and various common types of power rectifiers.

Washington Technical Institute

MECHANISMS (ELEC 261)

Three credits, one quarter.

The student will study motion and forces which excite and modify the motion of bodies. Topics covered include rectilinear motion, curvilinear motion, rotation, and plane motion pertaining to a combination of mechanical and electrical forces.

Washington Technical Institute

SERVO MECHANISMS (ELEC 262)

Three credits, one quarter.

The student will develop an understanding of synchronous machinery. Analytical and graphical techniques are used to develop the characteristics and equivalent circuits of synchronous alternators and motors. A study of a feedback control system will be covered.

Prerequisite: ELEC 261.

Washington Technical Institute

CONTROL SYSTEMS (ELEC 263)

Three credits, one quarter.

The principles and applications of electrical controllers are covered in this course, which serves as an introduction to automation. Devices for differentiation, integration, and proportioning are studied in detail. Hardware and circuitry for AC and DC industrial control devices, including contractors, starters, speed controllers, time delay, limit switches and pilot devices are studied.

Prerequisite: ELEC 262.

Washington Technical Institute

SHOP PRACTICES (ELEC 270)

Three credits, one quarter.

The student will become proficient in the use of hand tools, equipment, and the various types of materials which he will encounter in his work as a technician. The troubleshooting and repair of rotating equipment is emphasized and shop safety is stressed.

Washington Technical Institute

DIGITAL COMPUTER FUNDAMENTALS (ELEC 271)

Three credits, one quarter.

The student will study the essentials of unit record-equipment and digital computer theory as employed in business information systems.

Washington Technical Institute

DIGITAL COMPUTING SYSTEMS (ELEC 273)

Three credits, one quarter.

The student will learn concepts and facilities of a disk resident operating system. Material will include the use of the system control and system service programs.

Prerequisite: ELEC 271.

Washington Technical Institute

INSTALLATION PLANNING AND CODES (ELEC 276)

Four credits, one quarter.

The student will study the requirements of applicable electrical codes. He will become proficient in installation planning by completing a range of realistic project assignments covering typical industrial and commercial installation plans.

Washington Technical Institute

ELECTRICAL POWER DISTRIBUTION (ELEC 286)

Three credits, one quarter.

The student will learn the operation and technical details of power distribution and protection devices. System load analysis, rates, and power economics are also covered.

Washington Technical Institute

PREPARATION FOR F.C.C. LICENSING (ELEC 298)

Three credits, one quarter.

The student will prepare to take the Commercial Radio Operators License Examinations given by the Federal Communications Commission. Extensive use is made of practice examinations similar in scope and format to the actual examinations given the Federal Communications Commission.

Washington Technical Institute

ENGINEERING

FUNDAMENTALS OF ENGINEERING (ENGR 100)

Three credits, one quarter.

The student will be introduced to fundamentals of urban engineering work, water and waste distribution systems, transportation systems, public works, etc.

Washington Technical Institute

INTRODUCTION TO ENGINEERING METHODS (ENGR 102)

T[illegible] credits, one quarter.

Slide-rule practice, an introduction to analog and digital computers, programming of digital computer, vector geometry, graphical representation of data field trips to nearby center will be part of this introductory course.

Prerequisite: ENGR 101.

Northern Virginia Community College

INTRODUCTION TO ENGINEERING (NE 101)

Two credits, one quarter.

Survey of the various major fields of engineering will be covered. Introduction to certain basic techniques such as design, slide rule computation, engineering drawing, electronic construction are also included.

Federal City College

INTRODUCTION TO TECHNICAL ENGINEERING (ENGR 10)

Two credits, one quarter.

This introductory course to the work of the Engineering Technician will include the study of study of simple engineering problems; slide rule instruction and applications.

Northern Virginia Community College

ELEMENTS OF STATICS AND STRENGTH OF MATERIALS (ENGR 53)

Three credits, one quarter.

This is an introductory course for technicians of the basic principles of statics (forces, equilibrium, moments, etc.) and strength of materials (centroids, moments of inertia, stress and deformation, shear and moment diagrams, etc.) will be among part of the broad scope materials covered.

Northern Virginia Community College

INTRODUCTION TO ENGINEERING (ENGR 100, 101)

One credit, one quarter.

ENGR 100 Professional fields of engineering and the work of the engineer, requirements of training and character, professional ethics, the division of industrial practice and competition will be covered. Pure and simple problems from the various school of engineering are used with slide-rule applications.

Two credits, one quarter.

ENGR 101 Professional fields of engineering and the work of the engineer, along with the requirements and character, professional problems from the various schools of engineering are used with slide-rule applications.

Northern Virginia Community College

ENGINEERING GRAPHICS (NE 110)

Three credits, one quarter.

Instrument drawing, sketching, and slide rule practice; orthographic projection; descriptive geometry; methods of systematic representation of data, problems, and shapes are part of the graphical course.

Prerequisite: Algebra & Trigonometry.

Federal City College

ENGINEERING GRAPHICS (ES 101, 102)

Two credits, one semester each.

This course will cover elements of graphic communications for engineers and technicians. Topics will include theory of projection, technical sketching, orthographic projection; point, line, and plane analysis, descriptive geometry, supplementary views and development, pictorial projection, sectioning, precision dimensioning and fasteners, graphs, diagrams, functional scale layout and use, and the use of vectors for graphic solutions.

Prerequisite: For ES 102 is ES 101.

Montgomery College

ENGINEERING GRAPHICS I, II (ENGR 101, 102)

Three credits, one quarter each.

ENGR 101 The student will learn to identify by name and primary use the basic instruments used in the preparation of mutiview engineering drawings. The student will be able to draw and use properly the basic "alphabet of lines" and he will measure lines using the architects' and engineers' scales. He will letter using vertical uniform lettering of the Reinhardt style.

ENGR 102 The students will be able to draw, using standard drafting instruments, full section, half section, broken-out section, revolved section, removed section, offset section, and aligned section. The student will be able to apply the proper dimensions to a multiview drawing. He will draw thin extension lines and dimension lines with standard arrowheads, and he will place the lines and dimensions in accord with standard practice.

Prerequisite: ENGR 101.

Washington Technical Institute

ENGINEERING GRAPHICS I, II, III (ENGR 121, 122, 123)

Two credit hours, one quarter each.

ENGR 121 The student will learn drawing the theories of projection. Multiview drawings, pictorial drawings and sketching, geometrical construction, sectioning, lettering, dimensioning, auxiliary views, revolutions, assembly drawings.

ENGR 122 Graphical methods will be used in engineering design, layout and calculation. Properties and types of graphs for engineering and scientific purposes are covered.

Prerequisite: ENGR 121.

ENGR 123 A study of the analysis and graphic presentation of the space relationship of fundamental geometric elements which will include point, line, plane, curved surfaces, development and vectors.

Prerequisite: ENGR 121 or equivalent.

Northern Virginia Community College

MECHANIC I (STATICS) (ENGR 151)

Three credits, one quarter.

Principles and applications of free body diagrams for force systems, shear and moment diagrams, deflection of beams by numerical integration, and determination of section properties will be studied.

Northern Virginia Community College

STATICS AND STRENGTH OF MATERIALS I, II (ENGR 204, 205)

Three credits, one quarter each.

ENGR 204 The student will learn the principles of statics, axial loads, internal shear and moment in beams.

Prerequisite: MATH 113.

ENGR 205 The student will study flexural and shearing, stresses in beams, combined stresses, columns and deflection of beams.

Prerequisite: ENGR 204.

Washington Technical Institute

ENGLISH

ENGLISH FOR THE FOREIGN BORN

Non-credit, ten weeks.

Individual attention in class with oral practice in pronunciation, intonation and basic conversational patterns are included in this course. Intermediate and advanced.

Young Women's Christian Association

ENGLIST FOR THE FOREIGN BORN

Non-credit, one semester.

This course is open to all adult residents of Washington, D.C.

District of Columbia Public Schools

ENGLISH FOR FOREIGNERS I (2–38)

Non-credit, one semester.

This course is designed to improve the student's comprehension and speaking knowledge of English. This is not a beginner's course. Low intermediate course for the student who already has some knowledge of English. Emphasis is on comprehension, pronunciation and enunciation, word sequence, and sentence structure with correct grammatical usage. This is a basic course for English for Foreigners II and III.

United States Department of Agriculture Graduate School

AMERICANIZATION I

Non-credit, one semester.

This course is an introduction to English for those who wish to learn to read, write, and speak English.

Arlington Public School

ENGLISH FOR FOREIGNERS II, III (2–52, 2–53)

Non-credit, one semester each.

2–52 This course is an intermediate-to-advanced course. It will provide training in all communication skills-listening, speaking, reading, and writing sentences. Emphasis's on comprehension, pronunciation and enunciation, word sequence, and sentence structure with correct grammatical usage.

2–53 This is an advanced course. It is designed as a sequel to English for Foreigners II. Reading and comprehension of advanced English; vocabulary building; guided and free paragraph writing; punctuation, capitalization, and forms in letter writing will be included in this course.

United States Department of Agriculture Graduate School

ENGLISH AS A SECOND LANGUAGE

Non-credit, one semester.

First level in English upon which the student can establish a broad base of structures to help build his subsequent language experience. The situations are those to which the student can respond on a direct stimulus-response basis. The student learns to express simple ideas, within the frame of basic cultural patterns of the language, such as telling time, giving greetings, etc. or within a situational frame in which he can give a linguistic response to a direct stimulus. Reading and writing is used in conjunction with a workbook.

Washington Saturday College

ENGLISH

Non-credit, one semester.

Study of punctuation, grammar, spelling and other aspects of composition, in addition to readings in poetry, short stories, and prose writing will be contained in this course. Reading and writing ability is the main objective.

Washington Saturday College

INTRODUCTION TO ENGLISH GRAMMAR (ENGL 008)

Three credits, one semester.

A brief review of traditional English grammar, and an introduction to structural grammar, including phonology, morphology, and syntax is included in this course.

University College

PRINCIPLES OF ENGLISH GRAMMAR (EN 105)

Three credits, one semester.

This course is an elective for those who believe their preparation and background in the language to be inadequate. The course may be taken concurrently with any other English course, but may not be used as a substitute for another. It includes the study of the principles of grammar, sentence structure, punctuation, spelling, and vocabulary.

Montgomery College

BASIC GRAMMAR (2-39)

Non-credit, one semester.

This course will include intensive drill on recognition of parts of speech of English sentences and their contribution through parsing; phrases and clauses in analysis and synthesis drill.

United States Department of Agriculture Graduate School

BASIC ENGLISH

Non-credit, one semester.

This course will teach the student the basics of English grammar.

Catholic Archdiocese of Washington

ENGLISH USAGE REFRESHER

Non-credit, ten weeks.

This course will help students to overcome errors; review of grammar, punctuation, sentence structure.

Young Women's Christian Association

REVIEW OF BASIC ENGLISH

Non-credit, eight weeks.

This course is designed for those who cannot afford to make mistakes and who must be grammatically correct in their speaking and writing. It is a very practical course for executives, secretaries, supervisors, blossoming writers and editors, and those returning to school. The student will learn to use exact English by mastering such fundamentals as modifiers, clauses, verbals, verb tenses, parts of speech, and proper punctuation.

Catholic University

ENGLISH GRAMMAR REVIEW, SPELLING AND WORD POWER (ED 550)

Non-credit, Twelve sessions.

This course will include thorough review of traditional rules of grammar, word study, and spelling, application of correct usage to practical situations.

Fairfax County Public Schools

REVIEW ENGLISH (RPE-1)

Non-credit, one semester.

This course is designed for those students who need a review of English composition and grammar prior to undertaking credit courses in English and related subjects. Small sections permit the course to be directed toward the needs of the individual students. Emphasis is placed on the writing of unified and coherent paragraphs.

Montgomery College

PRACTICAL ENGLISH USAGE (2-112)

Two credits, one semester.

This is a refresher course in English grammar and usage and will contain exercises in analyzing sentences to give the student basic knowledge of sentence structure and grammar required for more advanced courses in grammar and writing; and exercises in correct usage and punctuation.

United States Department of Agriculture Graduate School

ENGLISH COMPOSITION I, II (E 101, 102)

Three credits, one trimester each.

E 101 This course is designed to provide basic instruction in rhetoric and composition through exercises and readings. Special emphasis is placed on construction, form, and style in all forms of written communication.

E 102 A continuation of English Composition I, designed to exercise the theoretical skills and learned in E 101 through analysis of literary examples and use of standard techniques for effective communication.

Prerequisite: E 101.

Southeastern University

FUNDAMENTALS OF BUSINESS ENGLISH (ENGL 180)

Three credits, one quarter.

An intensive study of the qualities and techniques is required in the preparation of business correspondence, reports, articles, and memoranda. This is a practical course in the reading and writing of business-related materials with emphasis on comprehension, analysis, and organization of ideas in a logical pattern.

Prerequisite: ENGL 102.

Northern Virginia Community College

BUSINESS ENGLISH

Non-credit, one semester.

Emphasis is placed on the oral and written skill of the English language.

Prince George's County Public Schools

BUSINESS ENGLISH

Non-credit, one semester.

This course is intended to improve the student's oral and written communication skills for more effective use on the job. Spelling, punctuation, composition, vocabulary and business forms are stressed.

Arlington Public School

ENGLISH FOR SECRETARIES (2-35)

Non-credit, one semester.

Sentence structure, capitalization, punctuation, vocabulary, and spelling are emphasized in this course.

United States Department of Agriculture Graduate School

CAREER ENGLISH (#A 20009)

Non-credit, one semester.

This course includes an in depth study of English grammar, punctuation, and principles of effective writing. It is excellent for secretaries, administrative assistants, editorial assistants, and professionals in all fields who need an extensive review of English usage in order to communicate more effectively.

Individual Learning Center
United States Department of Agriculture
Graduate School

VOCATIONAL ENGLISH (#B 20033)

Non-credit, one semester.

There are five areas of study in this course which will include basic English grammar, punctuation, capitalization, spelling, and vocabulary development. The student may take all five or select those most needed. The program is designed to help secretaries become active participants in the production of correspondence and reports by using their knowledge of punctuation, capitalization, spelling, vocabulary and grammar.

Individual Learning Center
United States Department of Agriculture
Graduate School

COMMUNICATION SKILLS I, II, III (ENGL 101, 102, 103)

Three credits, one quarter each.

This course is designed to teach the student to use the English language correctly and effectively and to develop skill in the preparation of reports, articles, essays, and correspondence related to technical fields. Attention is directed to sentence structure and paragraph development to express thoughts in lucid, coherent, well-developed form. Reading selections will provide material for discussion and topics for frequent writing assignments.

Prerequisite: Satisfactory score on appropriate English proficiency examination.

Northern Virginia Community College

COMMUNICATIONS I, II (ENGL 114, 115)

Three credits, one quarter each.

ENGL 114	The student will write clear and concise prose. His writing will demonstrate understanding of the principles of communication and rhetoric: levels of usage, causes of communications breakdowns, methods of defining terms, hypothesis testing and argumentation, classisfying and organizing data, and extending definitions. He will edit and revise his prose for clarity, logic, brevity, mechanics, and usage. He will also apply the principles of communication and rhetoric to spoken communication.
ENGL 115	The student will apply critical insights to a variety of literary forms: Novels, plays, poetry, and films. He will write, edit, and revise interpretive and evaluative essays based on his reading. He will analyze the value conflicts in the literary works, utilizing such concepts as the relationship of scene to act, languages as a form of behavior, symbolic representation and reinforcement, classic and romantic value systems.

Prerequisite: ENGL 114.

Washington Technical Institute

BUSINESS COMMUNICATIONS (ENGL 152)

Three credits, one semester.

This course will include practices in planning and writing effective business letters, memoranda, and reports.

Prerequisite: ENGL 101.

Prince George's Community College

FINANCE

FUNDAMENTALS OF FINANCE (F-101)

Three credits, one trimester.

Through a study of financial institutions and principles and their application to the management of personal finance, this course provides an introduction to the area of financial administration. Subjects covered include money, dollar value, expense control, budgeting, intelligent methods and policies in purchasing, charge, and installment buying; procedures in securing protection from risk to person and property; saving procedures; life insurance, investments, trust funds, home and property ownership; making a will; business fluctuations and forecasting as applicable to personal finance.

Southeastern University

MONEY AND BANKING (F-201)

Three credits, one trimester.

This course provides a survey of the development and use of money and credit and the effects of variations in this supply; significant monetary theories; American banking institutions; *Federal Reserve System;* branch and group banking, investment banking, savings institutions, trust companies, etc.

Prerequisite: EC-101.

Southeastern University

PUBLIC FINANCE (ECON 302)

Three credits, one semester.

This subject of this course is the fundamentals of public finance.

Prerequisite: ECON 101, 102.

University of Virginia School of General Studies

PUBLIC FINANCE (ECON 208)

Three credits, one trimester.

Description and analysis of fiscal system and institutions at national, state and local levels will be studied. Government expenditures, taxes, budget and debt are included. Course framework will be developed in terms of social goals.

Prerequisite: EC–102.

Southeastern University

GEOGRAPHY AND GEOLOGY

INTRODUCTION TO GEOGRAPHY (GE 101)

Three credits, one semester.

This course will be an introduction to geography as a field of study. The course consists of an extensive examination of the physical and cultural factors that contribute to and produce the variable character of the earth's surface and a discussion of the significance of geographic concepts and factors to world affairs.

Montgomery College

INTRODUCTION TO GEOGRAPHY (GEOG 100)

Three credits, one semester.

This course presents the basic rationale of variations in human occupance of the earth and stresses geographic concepts relevant to understanding world, regional, and local issues.

Prince George's Community College

INTRODUCTION TO PHYSICAL GEOGRAPHY (GEOG 240)

Three credits, one quarter.

This course will include a study of the major elements of the natural environment such as land forms, weather and climate, natural vegetation, and soils.

Northern Virginia Community College

INTRODUCTORY GEOLOGY LABORATORY (GEOL 102)

Three credits, one semester.

This is an examination of the basic concepts of human geography and the forces and factors shaping the cultural character of the surface of the earth viewed as the home of man. Topical studies include population, settlement patterns, and other political economic and cultural phenomena.

Prerequisite: GE 101.

Montgomery College

PHYSICAL GEOGRAPHY I, II, III (MARS 101, 102, 103)

Three credits, one quarter each.

MARS 101	The student will learn some fundamentals about the air, the sea, and the land and how they are interrelated and interact with each other.
MARS 102	Continuation of MARS 101. Prerequisite: MARS 101.
MARS 103	Continuation and completion of MARS 101 and MARS 102. Prerequisite: MARS 102.

Washington Technical Institute

PHYSICAL GEOGRAPHY (PS–104)

Three credits, one trimester.

This course is a study of earth and space relations; formation of continents and ocean basins; rocks and minerals; formation and distribution of earth's surface features; weather and climate; weather forecasting; soils; worldwide flora and fauna; maps and map structure.

Prerequisite: PS–101.

Southeastern University

PHYSICAL GEOGRAPHY (GEOG 101)

Three credits, one semester.

This is a world survey of man's physical environment, which will include the study of maps, weather, climate, landforms, mineral resources, water resources, vegetation, and soils. The approach is systematic with emphasis on the concept of nature's inherent ecological unity.

Prince George's Community College

INTRODUCTION GEOLOGY (GEOL 101)

Three credits, one semester.

This is a study of the earth, origin and nature of earth materials, origin and distribution of natural phenomena on and beneath the earth's surface, the development of land forms as a result of the activity of various agents and forces are pertained in this course. Included also is a consideration of the fossil record in which stress is placed on the relationship between living or once-living organisms and their natural environment.

Prince George's Community College

INTRODUCTION GEOLOGY LABORATORY (GEOL 102)

One credit hour, one semester.

This is a study of rocks and minerals, their identification and classification; the identification and study of various geologic features on the surface of the earth as well as the determination of simple structures beneath the surface; a study of the geology of the local area will be areas of interest covered.

Prerequisite: GEOL 101 or concurrent enrollment therein.

Prince George's Community College

GEOLOGY AND MINERAL RESOURCES OF WESTERN NORTH AMERICA (GEOL E6)

Three credits, one semester.

Emphasis is on geological resources of Western North America.

University of Virginia School of General Studies

WORLD REGIONAL GEOGRAPHY (GSGE E6)

Three credits, one semester.

Geography is studied on a regional basis.

University of Virginia School of General Studies

GEOGRAPHY OF THE UNITED STATES AND CANADA (GEOG 11)

Three credits, one semester.

This course concentrates on the geography of the U.S. and Canada.

University of Virginia School of General Studies

INVESTIGATING OUR PHYSICAL ENVIRONMENT (E SC E106)

Three credits, one semester.

(National Science Foundation course)

Application may be obtained by writing the Center office.

University of Virginia School of General Studies

GRAPHICS

ART AND VISUAL COMMUNICATIONS (VT 103)

One credit, one semester.

This course will include an analysis of original contributions and a basic study of the development of visual communications today.

Montgomery College

LETTERING (VT 123)

Three credits, one semester.

The history, design and execution of lettering for advertising is covered in this course.

Montgomery College

FUNDAMENTALS OF LETTERING I, II (ARTS 166, 167)

Three credits, one quarter each.

These courses will use calligraphy as an introduction to script and the constructed letter; also creative, freehand, and mechanical lettering; and other forms of letters used in today's graphic layout and design.

Northern Virginia Community College

LETTERING AND LAYOUT (ART 119)

Three credits, one semester.

This course will emphasize the history of lettering. It will teach the student how to develop skills in script lettering, poster styles, speedball and built up lettering. Basic layout techniques for visual communication are also included.

Prince George's Community College

LAYOUT AND TECHNIQUES (VT 124)

Two credits, one semester.

Advertising tools and methods of preparation of art work for reproduction will be included in this course.

Montgomery College

DRAWING AND SKETCHING I (ADVD 111)

Three credits, one quarter.

The student will learn the fundamental techniques of drawing from observation involving the use of linear and tonal-concepts. Beginning with pencil and progressing through charcoal to ink renderings, the student will learn how best to relate the observed material to his layout, illustration and general design work. While still-life renderings will have the emphasis, an introduction to life drawing and action sketching will also be offered.

Washington Technical Institute

DRAWING AND SKETCHING II (ADVD 115)

Three credits, one quarter.

The student will further his ability to draw from observation while developing his creative talents so necessary in the ever-broadening commercial air field. He will learn advanced techniques in rendering with pencil, conte crayons, charcoal, pastel and ink. While the emphasis will be placed on figure drawing for anatomical comprehension, the student will learn simplified perspective, architectural, landscape, animal and product rendering techniques.

Prerequisite: ADVD 114.

Washington Technical Institute

WATERCOLOR (ADVD 130)

Three credits, one quarter.

Working with transparent and opaque watercolor, the student will learn observational and creative techniques in rendering still life, figure, landscape, animal and stylized ink and color wash as a basis for advertising layout, illustration, product rendering and brochure design. While the majority of the work will be accomplished in the studio-classroom, the student will be supervised on several field trips whereupon he will learn to quickly render from life situations in this medium.

Washington Technical Institute

LAYOUT IN VISUAL COMMUNICATION (8–145)

Two credits, one semester.

Theory and practice of layout as key to visual communication, including chart, poster, printed page film, exhibit, and others; classroom demonstration, discussion, and analysis leading to home assignments for practice and application of basic rules will be included.

Prerequisite: Fair ability to draw, familiarity with lettering and typography, sense of design, and reproductive processes and media related terminology.

United States Department of Agriculture Graduate School

DESIGN AND LAYOUT I, II (ADVD 124, 125)

Three credits, one quarter each.

ADVD 124 The student will learn the basic concepts of design, specifically composition, balance and proportion and the relationship of line, form, texture and color in its depiction. Emphasis will be placed on the development of creative abilities needed for good layout work along with the study of contemporary design in all areas of commercial art.

ADVD 125 The student will become thoroughly acquainted with the initial elements of design in contemporary advertising and with problems considering lettering, type, photographs and color in good composition, designed to capture and hold the viewer/consumer's attention. The student will complete experimental projects (i.e., album and brochure covers) from thumbnail sketches to full-color, varied media comprehensives.

Prerequisite: ADVD 124.

Washington Technical Institute

ART, LAYOUT, AND DESIGN FOR REPRODUCTION (8–322)

Two credits, one semester.

This course is planned to help administrators, editors, educators, graphic personnel, and writers to prepare and use communications materials more effectively.

United States Department of Agriculture Graduate School

INTRODUCTION TO GRAPHIC REPRESENTATION (DRFT 120)

Three credits, one quarter.

The student will learn the use of instruments, lettering, sketching, and drawing conventions; neat, legible drawings and the value of visual presentations in technology.

Northern Virginia Community College

GRAPHIC TECHNIQUES I, II, III (ARTS 271, 272, 273)

Three credits, one quarter each.

This course is designed to teach the use of drawing instruments and materials; introduction to engraving processes; and the mechanics of reproduction for printing.

Northern Virginia Community College

GRAPHICS I: THEORY AND TECHNIQUE (420)

Three credits, one quarter.

An awareness of graphics and the part they play in our everyday life is discussed. Emphasis is placed on the development of skill in using graphic forms such as: typography, photography, overlays, etc. Creative use of graphic forms is encouraged as a final product.

Prerequisite. Photography (suggested supplemental courses: Drawing, Sculpturing, Psychology, Journalism).

Federal City College

GRAPHICS II: REPROGRAPHY (421)

Three credits, one quarter.

This course emphasizes the reproduction of communications material by such methods as printing, duplicating, photosetting offset, electrostatic, magnetic tapes, etc. An understanding of the theoretical concepts are stressed as well as a development of skill in understanding and operating the necessary technology for each process.

Prerequisite: Graphics I.

Federal City College

GRAPHICS III: APPLIED (422)

Three credits, one quarter.

This experience emphasizes the understanding of communications and psychology in designing effective visual presentations. Students will design and prepare art work to a state ready for photoengraving, design layouts and art work for publications, typeselection, copyfitting, proofreading, selection and preparation of visual materials for offset process, film and television.

Federal City College

PRODUCTION AND MANAGEMENT OF GRAPHICS (8–141)

Two credits, one semester.

This course is designed to assist personnel in visual and related fields of communications to understand problems in production procedures and management of graphics. Television, publications, multi-media programs, work flows, editing, proofing, supporting art, linotyping, engraving, and other materials used to complete project from rough idea to finished program.

United States Department of Agriculture Graduate School

EXHIBIT GRAPHICS AND FABRICATION (8–142)

Two credits, one semester.

This course will consider mainly exhibits, but with application to other fields of design; graphics, typography, photography, variety of techniques, exhibit design, construction, animation, materials, specifications and contracting.

United States Department of Agriculture Graduate School

GRAPHIC ARTS IN FEDERAL GOVERNMENT (8–144)

Two credits, one semester.

This course is an introductory survey of the field of graphic arts in the Federal Government. It is designed for practicing artists, designers, and others concerned with preparation and use of visual materials in many media.

United States Department of Agriculture Graduate School

GRAPHIC ARTS FOR ADULTS (ED 236)

Non-credit, one semester (12 sessions).

Emphasis is placed on silk screen; learning to print Easter cards, note paper and greeting cards in several colors. The students will build their own silk screen. Other printing techniques will including linoleum block prints, mono prints, relife prints, gadget prints, and rubbing prints will be explored in order to make pictures, wall hangings, decorative wrapping paper and fabrics, posters, and gifts, and announcements. Cards and other products may be mass-produced with these methods.

Fairfax County Public School

SILK SCREEN

Non-credit, one semester.

Evening classes will be held for this course.

Prince George's County Public Schools

PRINTMAKING I, II (HA 207, 209)

Four credits, one quarter each.

HA 207 This course serves as an introduction to the fine art graphic processes, woodcut; linoleum; etching; lithography and silkscreen. Students will supply tools.

Prerequisite: Drawing, painting or with permission of the instructor.

HA 209 This course is an introduction to the techniques of silk screening painting. The course will be primarily studio oriented, and concerned with the basic techniques and principles regarding this method of printing. Stress will also be placed on the history of this serigraphic process.

Prerequisite: Printmaking I, Design I, Drawing I, or with permission of the instructor.

Federal City College

CREATIVE ILLUSTRATION (8–146)

Two credits, one semester.

This course will cover the basic design and construction of modern-day illustration. Emphasis is on professional methods; classroom lectures with demonstrations, discussion, and analysis of homework.

Prerequisite: Active interest in home assignments and background in drawing helpful.

United States Department of Agriculture Graduate School

HEALTH TECHNOLOGY

INTRODUCTION TO HEALTH SERVICES (HLTH 101)

Three credits, one semester.

This introduction course includes a survey of major health care agencies in the United States, their organization, function and service; effects of hospitalization and emergency measures. Professional ethics and legal aspects of paramedical practice are considered.

Prince George's Community College

CONTEMPORARY HEALTH CONCEPTS (HLTH 105)

Two credits, one semester.

This course considers the current concepts relating to the health of the individual in the light of latest knowledge and developments. Special emphasis is placed on fitness, nutrition, mental health, human sexuality, degenerative disease, drugs, and consumer problems.

Prince George's Community College

MEDICAL TERMINOLOGY (HTEC 106)

Two credits, one quarter.

The student will learn the structure and derivation of medical terminology. He will be able to construct, recognize and spell correctly numerous medical terms, and will be able to use a medical dictionary when assistance is required.

Washington Technical Institute

URBAN HEALTH PROBLEMS (HTEC 218)

Three credits, one quarter.

The student will become acquainted with the following phases of urban health problems: identification of urban health problems, problem solving techniques, vital statistics, community health services and informational resources, environmental factors, medical health problems, and natural disasters or atomic attacks.

This is a course in which the sociological point of view is used to create a basic understanding of urban problems that are related to health. Guided learning experiences will be provided for through visits to selected community resources.

Washington Technical Institute

KEYPUNCH

KEYPUNCH COURSE

Non-credit and credit, sessions vary.

The aim of this course is to train unemployed or underemployed individuals for the occupation of Keypunch Machine Operators and to prepare them for employment in industry and government. This course comprehensively covers the basic fundamentals of data processing, the punched card and operation of keypunch machines and verifiers. Individuals are trained on the IBM 024, 026, 029 keypunch machines, the 056 and 059 verifiers, and the NCR 735 magnetic tape encoder. The keypunch machines have keyboards that are alphabetic, numeric, or a combination of both. Concurrent with keypunch machine operation, instruction is given in business English, business mathematics, typewriting and test preparation. Near the conclusion of the course, individuals are trained on the magnetic tape encoder. The inclusion of this machine will increase an individuals employment possibilities.

Opportunities Industrialization Center

KEYPUNCH (EDPM 107)

Six credits, one quarter.

The student will be able to keypunch at or above the industry standard in addition to preparing program cards and maintaining records and place of work utilizing material and instructions prepared to develop effective and consistent skill. Certificate, elective.

Washington Technical Institute

KEYPUNCH OPERATOR

Non-credit, one semester.

There is a shortage of trained keypunch operators. Those who successfully complete this course should find their employability improved.

Arlington Public Schools

KEYPUNCH/KEY TAPE OPERATIONS (DAPR 36)

Eight credits, one quarter.

A comprehensive occupational course designed to prepare students to function as keypunch/key tape operators in the current data processing employment market; an introduction to data processing principles.

Prerequisite: Typing skill of 30 wpm or departmental permission.

Northern Virginia Community College

LIBRARY

INTRODUCTORY COURSE FOR LIBRARY TECHNICIANS (2-125)

Two credits, one semester.

This basic course for students expecting to pursue an organized study program leading to non-professional Certified Statement of Accomplishment outlines purposes, procedures, techniques, and trends of library service. Written assignments are based on individual reading and study, test and improve facility of the student in English grammar and composition.

United States Department of Agriculture Graduate School

INDEXING (2-220)

Two credits, one semester.

This indexing course is primarily for periodicals, bulletins, reports, and books. Emphasis is on general procedures and matters of policy as well as on basic principles and techniques. Specific types of indexing are adapted to various subjects and popular style, contrasted with technical and scientific styles and examples of different kinds of indexes. Practical work in preparation of indexes, which will including making of cross references, alphabetizing, and editorial preparation of index cards and manuscripts for printer. Knowledge of library or editorial work is desirable.

United States Department of Agriculture Graduate School

INTRODUCTION TO CATALOGING AND CLASSIFICATION (2-135)

Two credits, one semester.

This course will cover the following areas: organization of library material, card catalog and auxiliary records, cataloging rules and routines, review of cataloging systems, and classification routines and review of classification systems.

United States Department of Agriculture Graduate School

CATALOGING AND CLASSIFICATION OF LIBRARY MATERIALS (EDLS 126)

Three credits, one semester.

This course will include principles and practice in the organization of library materials. Dewey Decimal Classification, rules for the dictionary catalog, Sears subject headings, treatment of non-book materials, and cataloging aids and tools are added items of interest.

University College

CATALOGING AND CLASSIFICATION II (2-139)

Two credits, one semester.

Discussion of more difficult problems in descriptive cataloging, classification, and subject headings are included in this course. Cataloging of practice collection is also included.

Prerequisite: Introduction to Cataloging and Classification, or one year's library experience.

United States Department of Agriculture Graduate School

BASIC REFERENCE SERVICE AND REFERENCE TOOLS (2-137)

Two credits.

The course is designed to help the student learn how and when to use large numbers of important or typical reference books or sets of books, such as dictionaries, encyclopedias, indexes, atlases, and yearbooks.

United States Department of Agriculture Graduate School

INTRODUCTION TO BIBLIOGRAPHIC SCIENCE (2-138)

Two credits, one semester.

Bibliographic science and bibliographic style for beginners; variations and forms of bibliography; study and comparison of general bibliographic tools and indexes of chief importance are included in this course.

United States Department of Agriculture Graduate School

PRINCIPLES OF LIBRARY ORGANIZATION (2-136)

Two credits, one semester.

System and function of a library based on component parts and services that obtain regardless of size or purpose. Organization of functions and services for utmost efficiency are also included in this course.

United States Department of Agriculture Graduate School

SCHOOL LIBRARY ADMINISTRATION AND SERVICE (EDLS 128)

Three credits, one semester.

The study of acquisition, circulation, utilization and maintenance of library materials; organization of effective school library programs; school library quarters and equipment; publicity and exhibits; evaluation of library services will be included in this course.

Prerequisite: EDLS 120, 122, and 126 or consent of instructor.

University College

DOCUMENTATION (2–152)

Two credits, one semester.

This course will be an introductory survey designed to acquaint the student with many general topics involved in locating, organizing, and communicating specialized knowledge. Non-conventional systems in libraries and other information services will be used.

United States Department of Agriculture Graduate School

NON-BOOK RESOURCES (GSLS E58)

Three credits, one semester.

This course will cover the principles of selection, classification, preparation and use of audiovisual material.

University of Virginia School of General Studies

MARINE SCIENCE

INTRODUCTION TO OCEANOGRAPHY

Non-credit, one semester.

This course is a general survey course on the characteristics of oceans and factors that control distribution of properties and of plants and animals. Biology, chemistry, geology and physics of the oceans will be studied.

Washington Saturday College

INTRODUCTION TO OCEANOGRAPHY (PY 156)

Four credits, one quarter.

Geology of the ocean floor, geography of the ocean, physical and chemical properties of sea water, ocean currents, and marine biology are covered.

Federal City College

GENERAL OCEANOGRAPHY (PS–103)

Three credits, one trimester.

Physical, chemical, and biological nature of the world's oceans and seas; ocean floor characteristics and their formation; tides; waves; currents; exploration techniques; shore processes; and economic exploitation of the ocean and seas will be studied in this course.

Prerequisite: PS–101 are a few items of interest that will be studied.

Southern University

OCEANOGRAPHY

Non-credit, one semester.

This course is a basic instruction in the principles of Oceanography.

Prince George's County High Schools

OCEANOGRAPHY I, II (MARS 204, 205)

Three credits, one quarter each.

MARS 204 The student will learn the basic physical and chemical characteristics of the ocean and their distribution.

Prerequisite: MARS 103.

MARS 205 The student will learn basic geological and biological characteristics of the ocean and their distribution. Bottom topography and methods of mapping will be discussed.

Prerequisite: MARS 204.

Washington Technical Institute

MARINE LIFE

Non-credit, one semester.

A general course which discusses inhabitants of life-providing water.

Prince George's County High Schools

MARINE INSTRUMENTATION (MARS 210)

Six credits, one quarter.

The student will become familiar with marine instrumentation, learn its purpose, and will be trained in its use, including field calibration, recognition of malfunction, and taking of reading.

Prerequisites: ELEC 103 and PHYS 113.

Washington Technical Institute

DATA RECORDING AND HANDLING (MARS 220)

Six credits, one quarter.

The student will become familiar with the types of data obtained by the instruments and what additional data are required to make the data meaningful. He will learn to make the required entries in the log and to apply initial correction when necessary.

Prerequisite: MARS 210.

Washington Technical Institute

MAINTENANCE (MARS 230)

Nine credits, one quarter.

The student will learn proper maintenance of the instrumentation as well as how to make minor repairs and to check calibrations.

Prerequisite: MARS 210.

Washington Technical Institute

MARKETING

MARKETING I, II (BUAD 234, 235)

Three credits, one quarter each.

BUAD 234 The student will become familiar with the marketing system. He will analyze the relationship between the customer and the market, forces determining customer preferences, buying habits, decision-making units, and other factors affecting market structure analysis. The student will also investigate concepts used by marketing analysts to determine customer participation in the expansion of demand.

Prerequisite: BUAD 105.

BUAD 235 The student will be introduced to Marketing Policy, Strategy, Analysis, and factors affecting Decision and Policy. The student will also be introduced to methods and models used in analyzing, interpreting, and forecasting of Marketing information.

Prerequisite: Marketing I.

Washington Technical Institute

PRINCIPLES OF MARKETING (MKTG 100)

Three credits, one quarter.

The principles, methods, and problems involved in the distribution and marketing of goods and services. The various marketing agents as wholesaler, broker, agent, cooperative, and trade associations will be pertained. Discussions of present day problems and policies as they are connected with the distribution and sale of commodities, pricing, advertising and promotion, and buyer motivation.

Northern Virginia Community College

PRINCIPLES OF MARKETING (M–100)

Three credits, one trimester.

This is an introductory course which has as its purpose the offering of a general understanding and appreciation of the marketing processes. Functions, institutions, and channels involved in the distribution of goods and services from producers to consumers. Also the course will include a study of buying motives, marketing practices, cost factors and policies.

Southeastern University

PHYSICAL DISTRIBUTION (M-201)

Three credits, one trimester.

Contained in the course will be a survey of the physical distribution system including transportation. The course covers the functions in the distribution and storage of goods, the characteristics of air, rail, motor and water carriers and other transportation media, the rate and service advantages and disadvantages of each and the regulatory schemes to which they are subject.

Prerequisite: M-100.

Southeastern University

GOVERNMENT AND MARKETING (M-203)

Three credits, one trimester.

This course will include a study of the various governmental regulatory and other influences upon marketing decisions of private business, as well as of the information and services provided by the government.

Prerequisite: M-201.

Southeastern University

MATHEMATICS

BASIC MATHEMATICS

Non-credit, one semester.

This course is open to all adult residents of Washington, D.C.

District of Columbia Public Schools

BASIC MATHEMATICS

Non-credit, one semester.

This fundamental course is geared to give the student a foundation in mathematical problems.

Catholic Archdiocese of Washington

BASIC ARITHMETIC (MATH 06)

Five credits, one quarter.

This is a foundation course in review of arithmetical principles and computations, designed to develop the mathematical proficiency necessary for selected curriculum entrance.

Northern Virginia Community College

BASIC MATHEMATICS (3–30)

Non-credit, one semester.

This course will include a review of arithmetic with applications.

United States Department of Agriculture Graduate School

EVERYDAY MATHEMATICS (4–101)

Two credits, one semester.

This course is designed for clerical workers called upon to apply fundamentals of arithmetic to their jobs. Emphasis is placed on review of business arithmetic, including fractions, decimals, ratios, and percentages. Special application is directed to civil service and business problems such as bank, cash, and trade discount, profit and loss, payrolls, simple and compound interest, fire insurance, stocks and bonds, property and income taxes, and determination of interest rates charged on time purchases and small loans.

United States Department of Agriculture Graduate School

GENERAL MATHEMATICS I, II (MATH 104, 105)

Three credits, one quarter each.

MATH 104 The student will review the fundamental arithmetic operations and develop skill in the following algebraic concepts: Operations with rational numbers; fundamental operations of algebra; simple exponents; and first degree equations in one variable.

MATH 105 The student will develop skill in the following: Special products and factoring; algebraic fractions; fractional equations; simultaneous equations; useful formulas; ration, proportion and variation; and graphic methods are areas which will be covered.

Prerequisite: MATH 104.

Washington Technical Institute

LOGIC (SYMBOLIC)

Non-credit, one semester.

This is a basic course in logic.

Prerequisite: None.

Prince George's County High Schools

DEVELOPMENTAL MATHEMATIS (MATH 01)

Five credits, one quarter.

A foundation course which bridges the gap between a weak mathematical foundation and the knowledge necessary for the study of mathematical courses in technical and professional programs. Arithmetic, algebra, geometry and trigonometry will be covered.

Northern Virginia Community College

DEVELOPMENTAL MATHEMATICS (MATH 001)

Non-credit, one semester.

Basic concepts of arithmetic and elementary algebra will be studied in this course. A refresher course with emphasis on ratios, proportions, percentage, fractions and signed numbers; a gradual introduction of such fundamental concepts of algebra as the simple equation and inequality.

Prince George's Community College

FUNDAMENTAL CONCEPTS OF ARITHMETIC (MATH 101) 3(3–0)

This course will include various number systems, laws governing operations within the number system and rationalization thereof, interpretation of common and decimal fractions, and computation with approximate numbers.

Bowie State College

FUNDAMENTALS OF MATHEMATICS (MATH 103)

Four credits, one semester.

This course will include an introduction to the various branches of mathematics within the historical framework of their origin. Such topics as sets, numeral systems, logic, geometry, modular arithmetic, algebra, and modern mathematical systems are explored from the standpoint of their development and impact on modern living.

Prerequisite: Satisfactory SAT score (350) or Math 001.

Prince George's Community College

ELEMENTS OF MATHEMATICS I, II, III (MATH 11, 12, 13)

Three credits, one quarter each.

This course is designed for the occupational student. Practical applications of elementary mathematics will including algebra, geometry, and trigonometry to everyday problems in the manufacturing and trade world.

Northern Virginia Community College

NEW FUNCTIONAL MATHEMATICS I (MATH 301)

Three credits, one semester.

Mathematical induction, system of natural numbers, mathematical systems, algebraic structures, integers, rational numbers, number systems in other bases, congruences, and rules for divisibility will be included in this course.

Bowie State College

MODERN MATH

Non-credit, one semester.

This is an introductory course to the new approach in modern mathematics.

Prince George's County Public Schools

MODERN MATH

Non-credit, one semester.

A course in mathematics which will bring students up-to-date.

Prince George's County High Schools

BASIC MATHEMATICS

Non-credit, one semester.

This course will instruct and drill the student in using the basic arithmetical operations with whole numbers, common fractions, decimals, application to percentage, interest and proportion. Emphasis is placed on increasing the manipulative skills of the student.

Prerequisite: None.

Washington Saturday College

BUSINESS MATHEMATICS (MA 107)

Three credits, one semester.

The student will review arithmetic fundamental operations are with whole numbers, fractions, decimals, and percentages; applications: billing, commission, inventory, depreciation, credit, interest, discount, and taxes; and business forms.

Montgomery College

REVIEW OF HIGH SCHOOL MATHEMATICS

Non-credit, one semester.

This refresher course is for persons out of high school. It is suitable for those preparing for a high school equivalency examination.

Prerequisite: High school algebra or consent of instructor.

Washington Saturday College

REVIEW MATHEMATICS (RPM–1)

Non-credit, one semester.

This is a course for students who need a review of the fundamentals of mathematics before undertaking college-level courses. Emphasis will be on the structures and concepts of arithmetic; a review of operation with whole numbers, decimals, and fractions; number bases; introduction to set theory; formulas; and operations in the set of integers (signed numbers).

Montgomery College

BASIC THINKING (NM 107)

Three credits, one quarter.

The course will utilize familiar life situations to develop elementary logic and provide mental exercises.

Federal City College

ELEMENTARY MATHEMATICAL CONCEPTS (NM 108)

Three credits, one quarter.

This course will include set theory; real number system and axioms of order, mathematical induction and properties of integers; and completeness of the set of real numbers.

Prerequisite—NM 102 or consent of instructor (Maybe taken concurrently with NM 109).

Federal City College

PROBLEM SOLVING AND MATHEMATICAL REASONING (NM 130)

Three credits, one quarter.

The primary course available for completion of the college wide mathematics requirement beyond NM 102; includes the discussion of nonroutine as well as routine problems; selected by the particular instructor and students, which will allow the development of some general principles of mathematical reasoning.

Federal City College

BASIC CONCEPTS OF MATHEMATICS (NM 005)

Three credits, one quarter.

A computationally oriented course will focus on the arithmetic of whole numbers, rational numbers as common fractions and as decimals, percent, ratio and proportion, and exponents; also included are an introduction to axioms, properties of order, and arithmetic with integers.

Federal City College

ELEMENTARY ALGEBRA I, II (NM 101, 102)

Three credits, one quarter each.

NM 101 An axiomatically oriented course with introduction to algebraic concepts and skills; will include operations on sets, the systems of whole numbers, of integers, of rational numbers, and of real numbers, computational skills and intuitive equation-solving within each system.

NM 102 A continuation of NM 101 with emphasis placed on reasoning skills in simplification of algebraic expressions and equation solving; includes operations with polynomial expressions, positive and negative exponents, rational expressions, solution of first degree and certain second equations and inequations, extends computational proficiency with positive and negative numbers and radicals.

Prerequisite: Elementary algebra I (NM 101).

Federal City College

ALGEBRA

Non-credit, one semester.

Instruction and drill in the first principles of algebra; the use of symbols, solution of equations and graphing are included in this course.

Prerequisite: First course in high school algebra or taken concurrently.

Washington Saturday College

INTRODUCTORY ALGEBRA (MA 10)

Three credits, one semester.

A review of the topics studied in a first course of algebra; the number system, algebraic expressions, basic operations, functions and their graphs, products and factoring, fractions, linear equations, exponents and radicals, ratio and proportion.

Montgomery College

ADVANCED ALGEBRA

Non-credit, one semester.

This course includes advanced topics in algebra for those students who are well prepared in basic math and elementary algebra. Depending on students' interests and capabilities geometry, trigonometry or pre-calculus mathematics may be treated.

Prerequisite: Good preparation in high school algebra and geometry, or consent of the instructor.

Washington Saturday College

INTERMEDIATE ALGEBRA (3–8)

Non-credit, one semester.

This course is designed primarily for the student with a limited background in Algebra.

United States Department of Agriculture Graduate School

COLLEGE ENTRANCE EXAMINATION MATHEMATICS

Non-credit, one semester.

This is specifically intended for persons preparing for the College Entrance Examination. It includes classroom solutions of sample problems from previous examinations.

Prerequisite is high school algebra and geometry or consent of the instructor.

Washington Saturday College

INTRODUCTORY COLLEGE MATHEMATICS I, II (MA 112, 113)

Three credits, one semester each.

Logic, sets, counting; sequences, sums; probability; functions and their graphs; systems of equations, vectors, matrices will be among the varied materials studied.

Prerequisite: Two units of college preparatory mathematics plus an appropriate score on the mathematics section of the general classification test, or MA 10/11.

Montgomery College

COLLEGE ALGEBRA (MATH 103)

Three credits, one semester.

Following a review and extension of fundamental principles, the course will include a study of quadratics, progressions, permutations, systems of equations, elements of the theory of equations, complex numbers, and probability.

Bowie State College

INTERMEDIATE ALGEBRA (MATH 002)

Non-credit, one semester.

The course will include basic algebraic operations, exponents, radicals, linear and quadratic equations, problem solving, progressions and logarithms.

Prerequisite: Either (a) SAT Math score (350 or higher) or (b) Math 001.

Prince George's Community College

BUSINESS MATHEMATICS (BD 231)

Three credits, one quarter.

The student will study the development of mathematical concepts and proficiency relative to interest charges, bank discounts, and compound interest; commission charges, dividends, and debt repayment; installment sales, partial payments, etc.

Federal City College

BUSINESS MATHEMATICS

Non-credit, one semester.

Emphasis is placed on accuracy in the four processes of Arithmetic. Areas covered are personal banking, borrowing money, investments, preparation of Federal Income Tax returns and the problems of the retailer, manufacturer and wholesaler. This course will prepare the student for accounting courses, or may be used as math credit towards high school diploma.

Arlington Public Schools

BUSINESS MATHEMATICS I, II (MATH 134, 135)

Three credits, one quarter each.

MATH 134 The student will study the mathematics used in solving problems associated with the following phases of business: percentages; trade and cash discounts; merchandising; depreciation; payroll; property and sales; and insurance.

Prerequisite: High School Algebra or MATH 104.

MATH 135 The student will study the mathematics used in solving problems associated with the following phases of business: interest; notes and drafts; partial payments; installments; installment purchases and periodic loan; present worth and true discount; and annuities.

Prerequisite: MATH 134.

Washington Technical Institute

MATHEMATICAL ANALYSIS (MATH 2)

Three credits, one semester.

Prerequisite: Math 1 or equivalent. The course will include selected elementary topics in finite mathematics.

University of Virginia School of General Studies

COLLEGE ALGEBRA AND TRIGONOMETRY (GSMA 8)

Three credits, one semester.

This course carries 3 hours of General Studies credit, but no credit for an engineering or college degree or engineering certificate at the University of Virginia. It is offered to those with inadequate mathematics background to prepare them for liberal arts mathematics or the engineering mathematics Analytical Geometry and Calculus.

Prerequisite: 2 years of High School Algebra, 1 year Geometry.

University of Virginia School of General Studies

GENERAL COLLEGE MATHEMATICS I, II, III (MATH 181, 182, 183)

Three credits, one quarter each.

This course is intended for students with majors other than mathematics, science or engineering. The first two quarters will include sets, the logic of algebra, the real numbers system, algebraic and transcendental functions, relations and graphs. The third quarter will include permutations, combination, probability and elementary statistics.

Prerequisite: Algebra I and either Algebra II or Geometry and a satisfactory score on appropriate mathematics proficiency examinations.

Northern Virginia Community College

COLLEGE MATHEMATICS I, II (MA 101, 102)

Three credits, one trimester each.

MA 101 A basic course in mathematics that is for all college students. Fundamental mathematical concepts and applications are emphasized. Topics covered will include;

sets, systems, equations, algebraic functions, real and complex numbers, exponents, and logarithmic functions.

MA 102 This course is a continuation of MA–101. Topics covered will include combinations and permutations, basic statistics, probability, logarithmic and trigonometric functions, simultaneous equations, determinants, matrices, and algebraic functions.

Prerequisite: MA–101.

Southeastern University

FUNDAMENTALS OF MATHEMATICS I, II, III (MATH 101, 102, 103)

Three credits, one quarter each.

A study of concepts of numbers; fundamental operations with numbers, formulas and equations, graphical analysis, binary numbers, Boolean and Matrix algebra, linear programming, elementary concepts of statistics will be exercised in this course.

Northern Virginia Community College

REAL NUMBER SYSTEM I, II (NM 250, 251)

Three credits, one quarter each.

NM 250 This course is specifically designed for students planning to teach in elementary grades, satisfies college-wide mathematics requirement beyond NM 102, sequential to NM 251; includes nature of deductive reasoning, systems of numeration, elementary properties of sets, properties of relations, equivalence relations, and functions.

MA 251 A continuation of a treatment of the structure and skills of arithmetic for prospective elementary school teachers which will include operations with and properties of whole numbers, modular arithmetic, prime factorizations, operations with and properties of integers, and absolute value.

Federal City College

FINITE MATHEMATICS I, II, III (MATH 191, 192, 193)

Three credits, one quarter each.

This course is intended for students with majors other than mathematics, science or engineering. Set theory, the real number system, probability theory, vectors, matrices, linear programming, systems of linear equations, introduction to theory of games will include various material covered.

Prerequisites: Satisfactory score on appropriate mathematics proficiency examinations and three units of high school mathematics including two units of algebra and one unit of geometry or equivalent.

Northern Virginia Community College

PLANE GEOMETRY (MA II)

Three credit hours, one semester.

This course covers the geometry of Euclid which will include rectilinear figures, circles, proportion and similar polygons, areas of polygons, regular polygons and measurement of circles, loci, constructions.

Prerequisite: One unit of algebra or MA 10.

Montgomery College

PLANE GEOMETRY (MATH 36)

Five credits, one quarter.

The student will study the fundamentals of plane geometry and an introduction to coordinate geometry.

Prerequisite: One unit of high school algebra or equivalent.

Northern Virginia Community College

TRIGONOMETRY (MATH 38)

Five credits, one quarter.

Fundamentals of trigonometry for students who need a survey or review of the basic principles of trigonometry are the main course objectives.

Prerequisite: One unit of high school algebra and one-half unit of high school geometry or equivalent.

Northern Virginia Community College

NUMERICAL TRIGONOMETRY (MA 104)

Two credits, one semester.

This course is for students in technical-terminal curriculums. The student will gain knowledge in measurement of angles, trigonometric functions, solution of right and oblique triangles using logarithmic computation, the sine curve.

Prerequisite: MA 10 or equivalent and one unit of plane geometry of MA 11.

Montgomery College

TECHNICAL MATHEMATICS I, II, III (MATH 111, 112, 113)

Three credits, one quarter each.

This course is designed for the technical student. Slide rule, review of geometry, dimensional analysis, analytical geometry of the straight-line, basic algebra through the advanced algebra of exponentials and logarithms, curve sketching, numerical trigonometry, introduction to analytical trigonometry, and an introduction to calculus will emphasize those techniques useful to the engineering student.

Prerequisite: Satisfactory score on appropriate mathematics proficiency examinations and one unit of high school algebra and one unit of high school geometry or equivalent.

Northern Virginia Community College

TECHNICAL MATHEMATICS I, II, III (MATH 111, 112, 113)

Three credits, one quarter each.

MATH 111 The student will study mathematical method, the number system, polynomials, exponents and radicals, equations, and vectors and matrices. He will apply the mathematical techniques to a variety of problems.

Prerequisite: High School Algebra, MATH 105 or test.

MATH 112	The student will study inequalities, functions, algebraic functions, exponential and logarithmic functions, and trigonometric functions of angles. Prerequisite: MATH 111.
MATH 113	The student will study trigonometric functions of real numbers, analytic geometry, intuitive differentiation, and hyperbalic functions. Prerequisite: MATH 112.

Washington Technical Institute

ENGINEERING TECHNICAL MATHEMATICS I, II, III (MATH 121, 122, 123)

Five credits, one quarter each.

Algebra, trigonometry, introduction to calculus, and some emphasis will be placed on graphical methods. The course sequence includes solutions of linear and quadratic equations, trigonometric functions, trigonometric curve sketching, logarithms, ratio, proportion and variation, vectors, complex numbers and the binomial theorem.

Prerequisite: Three units of high school mathematics other than general mathematics, and satisfactory score on appropriate mathematics proficiency examinations.

Northern Virginia Community College

REVIEW OF COLLEGE FRESHMAN MATHEMATICS (3–1)

Non-credit, one semester.

This course is a review of college Freshman mathematics.

United States Department of Agriculture Graduate School

MEDICAL LABORATORY

ORIENTATION TO THE MEDICAL LABORATORY (ML 101)

Two credits, one semester.

This course is an introduction to the organization and duties of the clinical laboratory; introduction to medical terminology, medical ethics and conduct; training in care and collection of specimens; introduction and practice in basal metabolism and electrocardiography.

Montgomery College

ORIENTATION TO LABORATORY TECHNIQUES (MEDL 151)

Five credits, one semester.

This is an introduction to the organization of the laboratory and the duties of the laboratory assistant. Medical terminology, physical set-up of hospital laboratories, care and collection of specimens will be included in this course.

Prince George's Community College

MEDICAL LABORATORY SCIENCE (ML 102)

Four credits, one semester.

Basic principles and theory of biochemical tests will be performed in routine clinical chemistry; training in laboratory skills needed for performing specific tests such as cholesterol, glucose, protein and nitrogen determinations; introduction to purpose and operation of instruments used in clinical chemistry; principles related to urine and gastric analysis.

Prerequisite: CH 103.

Montgomery College

MEDICAL LABORATORY TECHNIQUES I (MEDL 152)

Six credits, one semester.

Theory and basic principles of routine clinical chemistry tests such as glucose, urea, nitrogen and cholesterol are included. Instruction in basic techniques in urinalysis and hematology are also added materials studied.

Prerequisite: MEDL 151.

Prince George's Community College

MEDICAL LABORATORY TECHNIQUES II (MEDL 155)

Three credits, one semester.

The theory and directed practice in affiliated laboratories of tests and techniques, chemical instrumentation used in clincial chemistry will be covered. This course will include such tests as cholesterol, uric acid, protein and nitrogen determination, urinalysis and gastric analysis.

Prince George's Community College

MEDICAL LABORATORY TECHNIQUES III, IV (MEDL 251, 252)

Nine credits, one semester each.

MEDL 251	The student will be taught theory and directed practice in affiliated laboratories. The course includes blood banking and histo-chemical techniques; preparation of tissues for histopathological examination. Prerequisite: MEDL 152.
MEDL 252	Principles and practices of standard procedures and methods utilized in medical bacteriology, serology and parasitology will be studied. Experience in culturing bacteria, interpreting serological procedures, advanced techniques in hematology, methods of differentiating parasites affecting man are also included in this course. Prerequisite: MEDL 251.

Prince George's Community College

MISCELLANEOUS

CASHIERING COURSE

Non-credit, sessions will vary.

The aim of this course is to train unemployed or underemployed individuals for the occupation of cashiering and sales. This course comprehensively covers basic fundamentals of cash register operations. Concurrent with cash register operations, instructions are given in the fundamentals of salesmanship and merchandising, cashiering mathematics, preparation for job placement, and test preparation.

Opportunities Industrialization Center

ELECTRICAL WIRING

Non-credit, one semester.

This course is designed to teach the student the process of electrical wiring.

District of Columbia Public Schools

THE RECEPTIONIST

Non-credit, one semester.

This course is designed to train personnel entering the labor market as receptionists. Activities to be studied are: greeting callers, dealing with difficult people, effective telephone usage, handling mail, filing, appearance.

Arlington County Public Schools

BASIC SCIENCE

Non-credit, one semester.

This course is open to all adult residents of Metropolitan Washington, D.C. area.

District of Columbia Public Schools

SCIENCE IN INDUSTRY (NASC 126)

Three credits, one quarter.

This course is designed to provide a background in the physical sciences for the draftsman and other industrial workers. A study of the laws and principles of physics, chemistry and other fields of science with consideration to their relationship to industrial processes, products and methods will be undertaken.

Northern Virginia Community College

MACHINE SHOP

Non-credit, one semester.

This course will include basic machine shop practices.

Prince George's County Public Schools

MACHINE SHOP (ADVANCED)

Non-credit, one semester.

Advanced methods and procedures of machine equipment will be covered in this course.

Prince George's County Public Schools

INTRODUCTORY METEOROLOGY (ME 101)

Four credits, one semester.

This course covers a descriptive introduction to the elements of weather and climate; basic atmospheric processes of meterology and their geographic implications through time and space expressed in climatology. Emphasis is placed on balance of heat and moisture and their exchange through planetary circulation in the atmosphere.

Montgomery College

NURSING

FUNDAMENTALS OF NURSING I, II, III (NURS 111, 112, 113)

Five credits, one quarter each.

NURS 111—The student will be informed of the development of nursing skills for the physical, psychological, and social needs of patients. Selected clinical laboratory experience in cooperating health and welfare agencies.

NURS 112—Six credits, one quarter.

This course is a continuation of NURS 111.

NURS 113—Eight credits, one quarter.

This course is a continuation of NURS 112.

Northern Virginia Community College

ORIENTATION TO NURSING I, II, III (DN 200, 201, 202)

Three credits, one quarter each.

Orientation to Nursing is a three quarter continuation course. Primarily, the focus is on assisting the student to acquire effective communication skills. Concurrent with this emphasis, content on various aspects of nursing as an evolving profession is explored. The exploration is conducted from an historical perspective.

Federal City College

PRE-NURSING SEMINAR I, II, III (DN 100, 101, 102)

Two credits, one quarter each.

These Pre-Nursing Seminars are designed to assist students, interested in nursing as a major, with the synthesis of concepts from the natural sciences, social sciences, and the humanities as they relate to knowledge and understanding essential to effective participation in contemporary society. More specifically, students will be provided opportunities to explore and develop attitudes and behavior appropriate to functioning as a baccalaureate nursing student in an urban setting.

Federal City College

FUNDAMENTALS OF NURSING (NU 101)

Four credits, one semester.

This course covers the basic concepts and nursing activities common to the care of all patients. It presents concepts of nursing, ethical, and legal responsibilities relative to nursing practice; environmental factors in relation to patient safety and welfare; and maintaining, supporting, and reinforcing body defenses.

(Takoma Park Campus only)

Montgomery College

FUNDAMENTALS OF NURSING I (NURS 111)

Five credits, one trimester.

This course provides development of nursing skills for the physical, psychological, and social needs of patients. Selected clinical laboratory experience in cooperating health and welfare agencies.

Northern Virginia Community College

FUNDAMENTALS OF NURSING II, III (NURS 112, 113)

Six credits, one trimester.

NURS 112 This is a continuation of NURS 111.

Eight credits, one trimester.

NURS 113 This is a continuation of NURS 112.

Northern Virginia Community College

PRINCIPLES AND PRACTICES OF NURSING I (NURS 151)

Four credits, one semester.

The course includes an orientation to the field of health and selected knowledge and beginning skills to meet the basic needs of the patient. Emphasis is also placed on interpersonal relationships and communication skills with individual patients. Practical experience is provided in selected clinical areas.

Prince George's Community College

PRINCIPLES AND PRACTICES OF NURSING II (NURS 152)

Seven credits, one semester.

The student utilizes previously learned knowledge and skills in a family centered approach to the care of mother and child during the maternity cycle. Selected clinical experiences are provided.

Prerequisite: NURS 151. Laboratory fee: $10.00.

Prince George's Community College

PRINCIPLES AND PRACTICES OF NURSING III, IV (NURS 251, 252)

Nine credits, one semester each.

NURS 251–252 are offered during the 2nd year of the nursing program and is designed to enable the student to reinforce and consolidate previous learning and apply it to more complex nursing situations. The students will utilize problem-solving techniques to plan, implement and evaluate the nursing needs of physically and mentally ill persons.

Prerequisites: NURS 152, BIOL 201, BIOL 107, PHSC 151, BESC 100. Laboratory fee: $10.00 each semester.

Prince George's Community College

NURSING I, II, III (HTNU 101, 102, 103)

Six credits, one quarter each.

HTNU 101 The student will identify the influence of age and disability on the selfcare systems of the individuals and their need for definitive nursing care. The student will develop and demonstrate knowledge of the nursing process and a system of human assistance which includes effective interpersonal relationships and communications which persons in need of health care, members of the team and others in providing for the self-care needs of individuals in a therapeutic manner.

HTNU 102 The student will understand the fundamental process of illness and its effect upon the patient's system of daily living. She will identify scientific principles and related information to be utilized in understanding the problem solving approach to providing nursing care to adult patients with impairment of body functions, defenses and responses to illness, psychosomatic illnesses, a need for medical or surgical intervention, radiation, dietary, rehabilitation and supportive therapy. The student will, under the guidance of nursing academic advisors, practice nursing skills and develop techniques appropriate to the care of adults in a variety of nursing situations in hospitals and community agencies.

Prerequisite: HTNU 101.

HTNU 103 The student will identify her role as a person, a nursing student and as an agent who utilizes her knowledge, skill and abilities in a system of nursing assistance which is designed to meet the therapeutic, rehabilitative or adjustment needs of socially maladjusted, emotionally disturbed or mentally ill patients. She will be able to demonstrate skill in caring for these patients nursing situations in a hospital, a mental health center and other community or welfare agencies.

Prerequisite: HTNU 102.

Washington Technical Institute

NUTRITIONAL SCIENCE

FOOD SCIENCE I, II (NX 121, 122)

Four credits, one quarter each.

NX 121 This course is an introduction to food science. The course will cover the food technology dealing with man's food, history of food preservation, food spoilage and basics of food and food preservation.

NX 122 This course will cover the basic principles in food preservation by packaging, refrigeration, canning, freezing and dehydration and concentrates.

Prerequisite: Food Science I, Chemistry I or Biology I.

Federal City College

FOOD SCIENCE I, II, III (HRIM 111, 112, 113)

Three credits, one quarter each.

Interrelationship of the physical, biological and chemical principles of food, food preparation, food equipment, and food manufacturing processes will be studied in this course.

Prerequisite: High school chemistry or biology.

Northern Virginia Community College

NUTRITION I, II HRIM 134, 135)

Three credits, one quarter each.

These courses will teach the student the study of food composition and the nutrients essential to the health of human life, its function and metabolism.

Northern Virginia Community College

NUTRITIONAL SCIENCE II (NX 130)

Four credits, one quarter.

Metabolic pathways by which food are digested will be studied. In addition, special food "fads" to will be investigated in order to determine their scientific bases.

Prerequisite: Nutritional Science I.

Federal City College

PRINCIPLES OF FOOD PREPARATION I, II (HRIM 124, 125)

Four credits, one quarter each.

These courses will explore the applications of scientific principles and techniques to food preparation.

Northern Virginia Community College

PRINCIPLES OF BAKING (HRIM 140)

Four credits, one quarter.

Application of scientific principles and techniques of baking are taught in this course.

Northern Virginia Community College

CANNING (NX 215)

Four credits, one quarter.

Low acid and high acid foods will be canned on both an experimental and an industrial scale; and in-plant training will be undertaken.

Prerequisite: Food Science I and II.

Federal City College

MILK AND DAIRY PRODUCTS PROCESSING (NX 225)

Four credits, one quarter.

An introduction to Dairy chemistry and technology with emphasis on fresh milk, cheese and butter production.

Federal City College

FOOD ADDITIVES (NX 310)

Four credits, one quarter.

Animal laboratory experiments will be conducted to determine toxic levels of commonly used food additives.

Prerequisite: Food Science I, Food Science II, Food Microbiology, Food Chemistry.

Federal City College

QUANTITY FOOD PREPARATION I, II, III (HRIM 221, 222, 223)

Four credits, one quarter each.

Principles, standards and practices of cooking and baking are applied in large quantity food production.

Northern Virginia Community College

PRINCIPLES OF PRODUCT DEVELOPMENT (NX 243)

Four credits, one quarter.

The proper combination of organoleptic and chemical properties of foods will be studied. Each student will devise one new food product.

Prerequisite: Food Science I, Food Chemistry.

Federal City College

LITERATURE OF FOODS (NX 250)

Three credits, one quarter.

Current topics in Food Science and Technology will be reviewed in the scientific literature, with special emphasis on the literature of synthetic foods.

Prerequisite: Food Science I.

Federal City College

DIET THERAPY I, II (HRIM 234, 235)

Three credits, one quarter each.

This course will include application of nutrition principles in the dietary treatment of hospital patients.

Northern Virginia Community College

DIETARY NEEDS OF SPECIAL GROUPS (NX 302)

Three credits, one quarter.

The special dietary of the aged, pregnant women, and infants will be studied, with the objective of determining what special food products should be made available to these groups.

Prerequisite: Nutritional Science II.

Federal City College

EQUIPMENT LAYOUT-DESIGN (HRIM 186)

Three credits, one quarter.

This course will include a study in design, layout and specification requirements of food service equipment. Work measurement studies will be applied to quantity food production and its interrelationship to manpower and equipment requirements.

Northern Virginia Community College

FOOD SERVICE ORGANIZATION AN MANAGEMENT (IADM 150)

Two credits, one semester.

This course will introduce the student to the food services, principles of organization, management, financial control, and technical operations. In addition, records, reports, and organization charts will be included.

University College

FOOD SERVICE PERSONNEL ADMINISTRATION (IADM 153)

Two credits, one semester.

Principles of personnel administration in food services; emphasis is placed on personnel selection, supervision, and training, job evaluation, wage and payroll structure, current labor regulations and interpersonal relationships and communications.

Prerequisite: IADM 150.

University College

FOOD AND BEVERAGE COST CONTROLS I, II (HRIM 264, 265)

Three credits, one quarter each.

These courses will include pre-cost, pre-control methods relative to the menu, production control, purchasing, receiving, inventory control, and profit of food service system.

Northern Virginia Community College

FOOD SERVICE PURCHASING (HRIM 266)

Three credits, one quarter.

This course will cover methods and procedures for purchasing food for hotels, restaurants and institutions; markets, Federal and trade grades, governmental regulations, packaging, comparative versus price buying, yields and quality controls.

Northern Virginia Community College

OFFICE MACHINES

INTRODUCTION TO OFFICE MACHINES

Non-credit, one semester.

This course includes instruction on the electric typewriter, rotary and keydriven calculators, the printing calculator and the ten-key and full-key listing machines. The student will also practice transcribing from the dictaphone, and instruction on the use and operation of the ditto and mimeograph machines.

Arlington Public Schools

BUSINESS MACHINES COURSE

Non-credit, sessions vary.

The aim of this course is to train unemployed and underemployed persons for positions in the area of Business Machines Operations. The curriculum is divided into three major areas of training: office machines, bank machines and accounting machines. Concurrent with training in machine operation, instruction will be given in test preparation. The course is designed to familiarize the trainees with the operations of several types of office machines and to make them proficient at the operations of bank and accounting machines.

Opportunities Industrialization Center

BUSINESS MACHINES (BD 311)

Two credits, one quarter.

The student will learn to use rotary and key-driven calculators, key-punch machine, adding machines, voice-writing machines, stencil and fluid-process duplicators, electric typewriters.

Prerequisite: one year of typing.

Federal City College

BUSINESS MACHINES AND MATHEMATICS I, II, III (BUAD 101, 102, 103)

Three credits, one quarter each.

A sequence of three courses which will cover office machines and business mathematics. Office machines include a variety of adding machines and calculators designed for use in determining solutions to problems arising from normal business activities. The theories of mathematics are applied to business activities emphasizing the use of concepts and procedures concerning payroll computations, ratios, discounts, interest, sales and property tax, pricing mark-up and mark-down, etc.

Northern Virginia Community College

BUSINESS MACHINES (BUAD 108)

Two credits, one quarter.

A course to develop proficiency in the use of office machines such as calculators and adding machines.

Northern Virginia Community College

BUSINESS MACHINES (BUAD 124)

Three credits, one quarter.

The student will become familiar with a combination of accounting machines and other business machines in a laboratory situation. The student will develop a high degree of skill in the operation of adding and listing, calculating, and accounting machines. The student learns to calculate accounting problems pertaining to business with speed and accuracy.

Washington Technical Institute

TYPEWRITER REPAIR

Non-credit.

This course will teach the mechanics of typewriter repair.

District of Columbia Public Schools

USE OF BUSINESS MACHINES (MG 103)

One credit, one semester.

Application of basic principles of accounting and mathematics to various types of mechanical equipment as they are used in modern business; such as key-driven and crank-driven calculators, bookkeeping, adding, and listing machines. Special emphasis is given to an understanding of modern shortcuts and simplification procedures which characterize present-day business.

Montgomery College

PERSONNEL

FEDERAL PERSONNEL PROCEDURE (4-114)

Two credits, one semester.

This course includes elementary principles and procedures of Federal personnel administration, including study of Federal personnel structure and organization, rules and regulations of the Civil Service Commission, and other basic procedural sources; use of personnel forms and records; Civil Service examinations and recruitment; appointments; transfers; promotions; separations and reductions in force suspensions and disciplinary actions. Retirement; performance ratings; and leave and hours of duty.

United States Department of Agriculture Graduate School

HOW TO SUPERVISE AN EMPLOYEE (ED 912)

Non-credit, five sessions.

The student will experience the supervisors' problem-solving roles in productivity, communication, training, and leadership. Extensive use will be made of audiovisual materials and handouts.

Fairfax County Public Schools

OFFICE SUPERVISION

Non-credit, eight sessions.

This course is open to office supervisors and management as well as to potential supervisors. Seminar groups will be on Staff Development, Job Development, Human Behavior, relations with management, unions, and department heads.

Arlington Public Schools

MODERN SUPERVISORY PRACTICE (4-201)

Two credits, one semester.

This course is designed for supervisors or those interested in becoming supervisors. The course will include the study and application of principles of supervision, supervisory techniques, participation, motivation, communications, organization principles, workload analysis, planning, scheduling, work improvement studies, and solving problem cases prepared by students.

United States Department of Agriculture Graduate School

ADMINISTRATIVE PROCEDURE (4–108)

Two credits, one semester.

This course is designed for the student who wishes to become a supervisor or administrative assistant, or who has such a position in a small organizational unit. Day-to-day assignments will be in such units. Preparation of budget data, proper establishment of authority and responsibility, organizational structure, fundamentals of personnel administration, and requirements are essential for good supervision. Introduction to administrative planning, administrative procedures, and management generally at lowest organization level, will be including work reporting and work measurements, work processes, and work control reports. Relation of these studies to budgetary and personnel needs of unit are added. Theory of staff versus operating jurisdiction over administrative planning will be studied.

United States Department of Agriculture Graduate School

DEVELOPING COMMUNICATIONS SKILLS (R2–021)

Non-credit, one semester.

Most managers and supervisors know the need for and the basic principles of communication, but often do not have the skills to apply these principles. The course deals specifically with this problem and assists participants to identify, analyze, and improve their own skills in communicating with others in face-to-face situations. Each session is built around a film or lecture presentation with carefully related work materials and activities.

United States Department of Agriculture
Individual Learning Center

ADMINISTRATION AND SUPERVISION

Non-credit, one semester.

Evening classes.

This course will include the principles of administration and supervision.

Prince George's County Public Schools

SEMINAR FOR SUPERVISORS

Non-credit, sessions vary.

The student will learn practical information a supervisor should know.

Catholic University

PRINCIPLES AND PROBLEMS IN PERSONNEL MANAGEMENT (ED 902)

Non-credit, eight sessions.

This course includes problem-solving procedures, defining basic principles, various approaches to case study techniques, practical work in problem solving.

Fairfax County Public Schools

PERSONNEL MANAGEMENT (BUAD 276)

Three credits, one quarter.

The problems and issues in the administration of personnel actions are contained. This course includes organization and tasks of personnel development, significant personnel considerations and an appraisal of the position of labor in business today.

Northern Virginia Community College

PERSONNEL MANAGEMENT (COMM 63)

Three credits, one semester.

The student will receive an insight in the administration of personnel actions.

University of Virginia School of General Studies

PERSONNEL ADMINISTRATION II (BUAD 225)

Three credits, one quarter.

The student will learn additional personnel processes which will assist him in developing and directing his manpower. Emphasis will be on the compensation process, the collective bargaining process, the justice process, health and safety maintenance process, leadership process, and the departmentalized aspects of personnel management.

Washington Technical Institute

INTERVIEWING AND SELECTION OF EFFECTIVE EMPLOYEES (ED 921)

Non-credit, eight sessions.

Course material will include use of job descriptions, sources of good employees, initial screening of applicants, conducting effective interviews, evaluation.

Fairfax County Public Schools

GENERAL PSYCHOLOGY (PSYC 1)

Three credits, one semester.

The student will study the principles of human behavior patterns.

University of Virginia School of General Studies

PERSONNEL MANAGEMENT I, II (BSAD 160, 161)

Three credits, one semester each.

BSAD 160	This course deals with the problems of directing and supervising employees under modern industrial conditions. Two phases of personel administration are stressed, the application of scientific management and the importance of human relations in this field.
BSAD 161	Job Evaluation and merit rating and other personnel management techniques which are generally employed in business. Prerequisite: BSAD 160.

University College

ADVANCED PRACTICAL PERSONNEL MANAGEMENT (ED 906)

Non-credit, eight sessions.

Course material covered includes conducting effective meetings, problems in selling ideas, practical work in conducting meetings, general ideas, demonstrations.

Fairfax County Public Schools

PERSONNEL ADMINISTRATION I, II (BUAD 254, 255)

Three credits, one quarter each.

The student will acquire the skills necessary to understand and analyze Personnel Management as a network of processes, systems and conditions which affect an enterprise both large and small, industrial, commercial or social service. The learner will be able to solve problems having to do with the appropriate application of principles.

Washington Technical Institute

GENERAL PSYCHOLOGY (PSYC 201)

Three credits, one semester.

The student will be taught consideration of principles significant in understanding and explaining human experience and behavior.

Bowie State College

GENERAL PSYCHOLOGY I, II (PSYC 204, 205)

General Psychology I—5 credits, one quarter.

General Psychology II—4 credits, one quarter.

PSYC 204 & 205 Courses include the principles of behavior relating experimental data to practical problems: the measurement of ability, sensory and perceptive processes, organic basis of behavior, heredity, maturation, learning and thinking, motivation, emotion, personality and social factors in behavior.

Northern Virginia Community College

GENERAL PSYCHOLOGY I, II, III (PSYC 201, 202, 203)

Three credits, one quarter each.

This course includes the principles of behavior with a relating of experimental data to practical problems: the measurement of ability, sensory and perceptive processes, organic basis of behavior, hereditary, maturation, learning and thinking, motivation, emotion, personality and social factors in behavior.

Northern Virginia Community College

PSYCHOLOGY I, II (PSYC 124, 125)

Three credits, one quarter each.

PSYC 124 The student will apply the principles of general psychology to increase his understanding of human interaction, behavior, and adjustment. The student will differentiate among the schools of psychology. He will describe methods of investigation and explain the biological influences on behavior, the role of environment, and the basic concepts of perception, motivation, and learning.

PSYC 125 The student will learn the basic development processes of the infant, the child, the adolescent, and the maturing adult. Patterns of normal and abnormal growth and behavior will be systematically observed and studied.

Prerequisite: PSYC 124.

Washington Technical Institute

PERSONNEL PSYCHOLOGY

Non-credit, sessions vary.

Personnel directors, employers, supervisors, parents, teachers, nurses—even bossy people—find this course most useful and stimulating. The course is geared to the needs of those attending. Some of the topics are: qualities of a supervisor; building morale; incentives and motivation; problem-employees; reprimands and commendations; and idea-exchange.

Catholic University

GOVERNMENT AND BUSINESS (B-206)

Three credits, one trimester.

The student will study the public policy-making process regarding social, economic, and political relationships between government and business. Emphasis is placed on government functions relative to the national economy in assistance, promotion, regulation, direct and contract operations, and stabilization. Special attention is given to public enterprise and market competition, labor relations, agriculture, natural resources and regulation of utilities.

Prerequisite: B–101.

Southeastern University

HUMAN RELATIONS IN MANAGEMENT (MG 205)

Three credits, one semester.

This course analyzes human interaction in business situations for their effect on management's aims. It examines the demands of workers, informal groups, unions, and organization structure for their influence on effective supervision and the implementation of standard personnel administration functions.

Montgomery College

HUMAN RELATIONS

Non-credit, one semester.

This course is a basic introduction to Human Relations.

Prince George's County High Schools

SURVEY OF HUMAN RELATIONS (PSYC 28)

Three credits, one quarter.

A survey of the basic principles of psychology as applied to everyday problems of American living. This course is designed to familiarize the student entering an occupation with the attitudes and habits of successful citizens.

Northern Virginia Community College

HUMAN RELATIONS (COMM 68)

Three credits.

This course is designed to teach the student the basic principles of psychology in human relations.

University of Virginia School of General Studies

HUMAN RELATIONS (PSYC 128)

Three credits, one quarter.

The student will study the human personality and its reaction upon other personalities; the application of psychology to problems in industry and private life; and some introduction to such matters as selection, training and placement of employees.

Northern Virginia Community College

HUMAN RELATIONS AND LEADERSHIP TRAINING (BUAD 110)

Three credits, one quarter.

The task of management involved in getting things done through people; understanding of human motivation and behavior patterns, performance, and analysis of manpower growth in an organization.

Northern Virginia Community College

PERSONNEL MANAGEMENT (MG 204)

Three credits, one semester.

Covered in this course will be the development and use of psychology, tools and records, and management techniques in personnel administration. Coverage of the following major functions of personnel management will be included: recruitment, placement, employee and union relations, training and career development, manpower management, and employee inventory.

Prerequisite: PY 201, or consent of instructor.

Montgomery College

PERSONNEL ADMINISTRATION (B-202)

Three credits, one trimester.

This is a study of the methods and procedures used by *business* *management* in recruiting, selecting, and maintaining an efficient and co-operative work force. Provides a foundation for broad understanding and evaluating personnel policies and problems.

Prerequisites: B–201, SS–122.

Southeastern University

THE SUPERVISION OF PERSONNEL (B–203)

Three credits, one trimester.

This course deals with the problems of the first-line supervisor and how he can meet them most effectively. The principal objectives are to describe and analyze the important concepts of supervision, to set forth the supervisor's major responsibilities and his relations with others. Cases and problems are used extensively.

Prerequisite: B–202.

Southeastern University

JOB EVALUATION AND WAGE INCENTIVES (B–204)

Three credits, one trimester.

The course will emphasize theory and techniques in effectively planning job analyses and evaluations; principles of wage determinations; job description and classification; wage and salary structure; incentive systems; pertinent legislation; and occupational information presented with practical case studies.

Prerequisite: B–202.

Southeastern University

PHOTOGRAPHY

PRINCIPLES OF PHOTOGRAPHY (VT 241)

Three credits, one semester.

This course is an introduction to equipment and techniques for making photographs, familiarization with cameras, meters, films, lighting, and basic darkroom techniques.

Prerequisite: Sophomore standing or consent of the instructor.

Montgomery College

INTRODUCTION TO PHOTOGRAPHY (ARTS 180)

Two credits, one quarter.

This course is an introduction to the basic principles of photography with laboratory work related to the student's major field of interest.

Northern Virginia Community College

INTRODUCTION TO PHOTOGRAPHY (8-70)

Non-credit, one semester.

Nontechnical demonstration course which is designed for camera enthusiasts desiring to understand how their camera, films, and prints work; camera types and operation; film types and uses; developing and printing; filters; exposures; planning; composition, and lighting; also portraiture; motion pictures; color photography. Exhibition and demonstration of equipment, materials, and techniques will be included in this course.

United Stated Department of Agriculture Graduate School

FUNDAMENTALS OF PHOTOGRAPHY (ARTS 186)

Five credits, one quarter.

This course is a study of the fundamental techniques of the camera and its expressive possibilities in relation to the field of design and visual communication.

Northern Virginia Community College

PHOTOGRAPHY

Non-credit, one semester.

Evening classes will be held to study the essentials of photography.

Prince George's County Public Schools

PHOTOGRAPHY (360)

Three credits, one quarter.

Emphasis will be on an understanding of the camera and its effective use. It will include the anatomy of the camera and how its parts relate to each other and function together. The study of light and controlling the amount and speed with which it falls upon the film. Film developing process will include the equipment, chemicals and the setting up of the darkroom. The development of black and white as well as color is stressed.

Prerequisite: None.

Federal City College

PHOTOGRAPHY

Non-credit, one semester.

A course designed to instruct in the fundamental phases of photography—lighting, posting, developing, printing, etc. Film developing, contact printing and enlarging phases of photography desired by the majority of the students will be stressed in at least six lessons that will be held in the darkroom.

Arlington Public Schools

PHOTOGRAPHY (ADVD 250)

Three credits, one quarter.

This course is offered by the Printing and Publishing Department. The student will gain mastery of the camera necessitated by the ever-increasing use of photography as an advertising medium. He will learn composition, posing and lighting; the darkroom techniques of developing, printing and enlarging; cropping and layout to enhance the ad, cover design, etc.

Washington Technical Institute

COPY PREPARATION: PASTEUP AND PHOTOGRAPHIC WORKSHOP (8–165)

Three credits, one semester each.

First semester: Copy preparation—pasteup. This course is designed to acquaint the student with fundamentals of good composition and layout and application of these principles. Instruction and use of drafting equipment and materials necessary to preparation of mechanicals for advertisments, ruled forms, simple and complex booklets for camera ready copy, using photographs, illustrations and color overlays. *Second semester:* Laboratory theory and practice in fundamentals of basic photo-lithographic processes as applied in printing medium, will include instruction in use of process cameras and other photomechanical equipment for preparation of prints and negatives used in pasteup; photographing of complete assignments; stripping of line and halftone negatives; opaquing and engraving of final press negatives, proofing, and making of press plates.

United States Department of Agriculture Graduate School

OFFSET STRIPPING AND NEGATIVE WORK (8–171)

Three credits, one semester.

The student will participate in a workshop at apprentice level. Film assembly and stripping procedures and techniques as applied to black and white and simple color register work in photolithography; survey of stripping; tools for stripping and their use; basic mathematics; opaquing and retouching; cutting and scribing lines; negative engraving; stripping inserts and corrections; ruling pen practice; making half-tones and tints; silhouetting half-tones; quality control problems; preparing the dummy; making accurate layouts; signature imposition; attaching negatives to flats; complimentary flats for double printing; color proving for accurate check. Other stripping problems and procedures will be covered.

Prerequisite: Survey of Lithography, or special permission.

United States Department of Agriculture Graduate School

OFFSET PHOTOGRAPHY (8–174)

Three credits, one semester each.

The student will participate in a workshop at apprentice level. The course includes contact and camera line and half-tone negatives for photolithography; darkroom processing; contact and mechanical screens; and filters and lens formulae.

Prerequisite: Survey of Lithography, or equivalent.

United States Department of Agriculture Graduate School

FUNDAMENTALS OF PHOTOGRAPHY I (8–192)

Two credits, one semester.

The student will learn scientific principles of photography. This course is a foundation for more advanced courses in photography; nature of photographic process; factors in development, fixing, and washing; light as applied to photography; lenses, image formulation, and judging exposure; effects of lighting on pictorial rendition of objects.

Prerequisite: Introduction to Photography, or equivalent.

United States Department of Agriculture Graduate School

PRACTICE OF PHOTOGRAPHY I (8–193)

Three credits, one semester.

Laboratory practice and demonstration of principles will be taught [illegible] Fundamentals of Photography I. It offers the student opportunity to become familiar with recommended procedures and techniques; contact printing and processing; selection of printing papers; processing of negative roll film, cut film, and film pack; diagnosis and remedy of processing defects; and types of cameras, their operation and uses, and application of filters.

United States Department of Agriculture Graduate School

FUNDAMENTALS OF PHOTOGRAPHY II (8–195)

Two credits, one semester.

The student will learn theory to obtain good negative by controlled exposure and development; principles of projection printing; proper selection and utilization of darkroom equipment;

quality control procedures in everyday photography; photo-sensitive materials; use of exposure meter; functions of light filters; types of lighting; and science of sensitometry to measure and control photographic process.

Prerequisite: Fundamentals of Photography I and Practice of Photography I, or equivalent.

United States Department of Agriculture Graduate School

PRACTICE OF PHOTOGRAPHY II (8–196)

Two credits, one semester.

The student will be taught projection printing; application of sensitometric measurements; print correction; composite printing; use of variable contrast papers; lighting; rendition of form and texture; light patterns; effect of light on color, toning, and print quality analysis.

Prerequisites: Fundamentals of Photography I, Practice of Photography I, and Fundamentals of Photography II. May be taken concurrently with Fundamentals of Photography II.

United States Department of Agriculture Graduate School

PHOTOGRAPHY WORKSHOP I, II, III (ARTS 281, 282, 283)

One credit, one quarter each.

Advanced practical study in the photography laboratory covering all phases of photography pertinent to graphic arts are taught in this course.

Prerequisite: ARTS 186.

Northern Virginia Community College

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PHOTOGRAPHY (ADVANCED)

Non-credit, one semester.

Evening classes. The student will study advanced techniques in photography.

Prince George's County Public Schools

COLOR PHOTOGRAPHY AND PRINTING (8–270)

Two credits, one semester.

This course teaches basic theory and practice in making color prints on positive color materials and negative color materials.

Prerequisite: Background in black and white photography and 4- x 5-inch color negatives for practical application in laboratory, or special permission.

United States Department of Agriculture Graduate School

ADVANCED PHOTOGRAPHIC PROBLEMS (VT 242)

Three credits, one semester.

Technical problems in commercial and illustrative photography will include portraiture, industrial and scientific subjects, copying, and retouching.

Montgomery College

PHOTOGRAPHY FOR PUBLICATION (VT 244)

Three credits, one semester.

The course includes technical requirements for use of photographs in publications; control of reproduction quality through choice of materials and techniques; pictorial layouts and photojournalism; introduction to color reproduction methods.

Prerequisite: VT 241 or consent of the instructor.

Montgomery College

CHEMISTRY OF PHOTOGRAPHIC PROCESS (8–294)

Three credits, one semester.

This course teaches proper procedures for conducting experiment and writing technical report; fundamentals of general chemistry and chemistry of photographic process; emulsion manufacture, solution formulae, analytical procedures, and other related chemistry; laboratory equipment, glassware, and apparatus; their role, handling, and technique; replenishment programs; and other primary control procedures.

United States Department of Agriculture Graduate School

MECHANICS AND KINETICS OF PHOTOGRAPHIC PROCESS (8–295)

Three credits, one semester.

This course teaches principles of light, optics, and photometry; Photographic sensitometry, densitometry, and related mechanics and control of their photographic process; anomalies such as bromide drag, adjacency effect, Clayden effect, Herschel effect, Alberts effect, Sabattier effect, and others; tone reproduction, image enhancement, density slicing, automatic dodging, and other unique photographic phenomena.

United States Department of Agriculture Graduate School

PROCESS PHOTOGRAPHY AND PLATEMAKING (VT 114)

Three credits, one semester.

This course is an introduction to the process camera and to reproduction of line and halftone copy; negative stripping and offset platemaking; preparation of negatives and plates for single-color and multicolor printing.

Montgomery College

PROCESS PHOTOGRAPHY I, II (PRTG 134, 135)

Three credits, one quarter each.

PPTG 134 The student will learn darkroom theory, techniques and materials; and operation of the horizontal and vertical process camera will be part of the instruction.

PPTG 135 The student will be introduced to halftone photography, the principles of the contact screen and the use of the densitometer.

Prerequisite: PRTG 134.

Washington Technical Institute

PROCESS PHOTOGRAPHY III (PRTG 236)

Three credits.

The student will learn the latest photomechanical techniques and materials and their proper utilization.

Prerequisite: PRTG–235.

Washington Technical Institute

PRINTMAKING (AR 223, 224)

Three credits, one semester each.

This is an introduction to the techniques of etching, woodblocks, planography and silk screen as a fine art are included in this course. Emphasis is placed on the historical development of printmaking and on the continuation of the individual's creative development in drawing and design.

Montgomery College

PHYSICS

SURVEY OF PHYSICAL SCIENCE I, II (PS-101, 102)

Three credits, one trimester each.

PS 101 This course is an introduction to the nature of science and how it develops. Astronomy; geometric optics; laws of motion; elementary atomic chemistry and physics; physical optics; spectral analysis and cosmology will all be studied.

PS 102 Matter and its ultimate structure; chemical combinations; atomic physics; organic chemistry; formation of minerals and rocks; basic geology, seismology, metallurgy, and electronics will be materials covered.

Prerequisite: PS 101.

Southeastern University

GENERAL PHYSICS

Non-credit, one semester.

A beginning physics course for students who have not completed a course in calculus. The course will cover the subjects of mechanics, heat, sound, electricity, magnetism, light, and an introduction to vectors and atomic physics. Laboratory experiments will be conducted to acquaint the student with some of the scientific instruments and methods used in physical measurement.

Washington Saturday College

PHYSICS (PHYS 06)

Five credits, one quarter.

This foundation course in general physics is designed to develop a basic understanding of physics.

Northern Virginia Community College

INTRODUCTORY PHYSICS (PHYS 101, 102, 103)

Four credits, one quarter each.

These introductory courses will include a survey of general physics, treating briefly the fundamentals of mechanics, properties of matter, heat, magnetism, electricity, sound, light, and radiation.

Northern Virginia Community College

INTRODUCTORY PHYSICS I, II (PHYS 101, 102)

Four credits, one semester each.

PHYS 101 A consideration of those concepts in physics which are related to the areas of mechanics, electricity and magnetism and electromagnetic radiation. It is designed primarily for students in the Arts and Sciences Curriculum, but may be elected in place of PHYS 151 in the Technical Curricula whose course requirements include Physics. This course does not satisfy the Physics requirement for Science or Engineering majors.

Prerequisite: Satisfactory completion of one year of High School Algebra, or equivalent mathematical background.

PHYS 102 This course is a continuation of PHYS 101. It will include concepts in heat, wave motion and sound, optics, and topics in Modern Physics. It is designed primarily for Arts and Sciences students but may be elected in place of PHYS 152 by students in the Technical Curricula. This course does not satisfy Physics requirements for Science or Engineering majors.

Prerequisite: PHYS 101 or PHYS 151.

Prince George's Community College

INTRODUCTORY COLLEGE PHYSICS (PHYS 2)

Four credits, one semester.

(For Liberal Arts students)

Prerequisite: Phys 1. Laboratory and Lecture.

University of Virginia School of General Studies

CHEMISTRY AND PHYSICS (PHSC 151)

Three credits, one semester.

Included will be selected topics from inorganic, organic, and biochemistry, and the principles of chemistry and physics. Emphasis is placed on application to human physiological processes and on services used in medical diagnosis and in the care of patients.

Prince George's Community College

CONCEPTS IN PHYSICS (PY 099)

Four credits, one quarter.

The fundamental ideas of physics are introduced by the study of light and matter energy and the kinetic theory of gases. This course has no mathematical prerequisites and is designed for freshmen as well as nonscience majors from the upper classes.

Federal City College

METHODS OF SCIENCE (PY 100)

Four credits, one quarter.

Selected topics from the elementary mathematical and laboratory techniques will be used in science, including fractions, proportions, measurements, slide rule, linear and quadratic equations, graphs and experimental data handling. This course is designed for entering freshmen.

Federal City College

PHYSICAL SCIENCE A, B, C (PY 151, 152, 153)

Four credits, one quarter each.

PY 151 A study of light, energy and the kinetic theory and application to crystal structure and an understanding of the nature of matter will be studied in this course.

PY 152 A study of electricity, magnetism, atoms, molecules and radioactivity will be taught. The course will use many laboratory experiments demonstrations and films.

PY 153 A study of the earth and its atmosphere, weather and environmental pollution effects will be studied by the participant.

Federal City College

GENERAL PHYSICS—HEAT, WAVE MOTION, SOUND, AND OPTICS (PH 231)

Four credits, one semester.

Fundamental laws of statistical physics, kinetic theory, wave motion, interference and refraction; special theory of relativity and acoustics are included.

Prerequisite: Physics 130 and concurrent registration in MA 202.

Montgomery College

GENERAL PHYSICS—ELECTRICITY AND MAGNETISM AND NUCLEAR, QUANTUM, SOLID STATE, AND PLASMA PHYSICS (PH 232)

Four credits, one semester.

This course will include a basic study in physics.

Prerequisite: PH 231, and concurrent registration in MA 203.

Montgomery College

GENERAL PHYSICS—MECHANICS (PH 130)

Three credits, one semester.

This course will include the study of the fundamental laws of motion, force and energy; principles of mechanics; particle collision phenomena; rotational mechanics, and gravitation.

Prerequisite: Concurrent registration in MA 119.

Montgomery College

PHYSICS I, II, III (PHYS 111, 112, 113)

Four credits, one quarter each.

PHYS 111 The student will demonstrate his ability to relate theoretical principles with practical problems through programmed, self instructional materials and other necessary media and equipment which emphasize the principles of measurement, basic mathematics, conversion, instrumentation, basic algebra, trigonometry, magnetism and static electricity.

PHYS 112 The student will demonstrate his ability to relate theoretical principles with practical problems through programmed, self instructional materials and other necessary media and equipment which emphasize the principles of capacitance, electric circuits, electrochemical effects, electronics, wave motion and sound.

Prerequisite: PHYS 111.

PHYS 113 The student will demonstrate his ability to relate theoretical principles with practical problems through programmed, self instructional materials and other necessary media and equipment which emphasize the principles of heat and work, light, optics, reflection, refraction, optical instruments, atomic structure, nucleonics, nature radioactivity, and nuclear disintegration.

Prerequisite: PHYS 112.

Washington Technical Institute

PRINCIPLES OF PHYSICS (5–155)

Three credits, one semester.

Designed to acquaint students with fundamental physics.

United States Department of Agriculture Graduate School

POLICE SCIENCE

INTRODUCTION TO LAW ENFORCEMENT (PLCE 100)

Three credits, one quarter.

The essence of this course is the philosophy and history of law enforcement; overview of crime and police problems; organization and jurisdiction of local, state, and Federal law enforcement agencies; and a survey of professional career opportunities and qualifications required.

Northern Virginia Community College

PATROL ADMINISTRATION (PLCE 110)

Three credits, one quarter.

This course will cover the theories, history and development of police patrol. It examines the methods and techniques of the various types of patrol and their importance to the overall police function. It also focuses on the responsibilities of patrol officers and supervisors in identifying police hazards, preventing crime, providing police services, and establishing sound public relations. Practical exercises are included.

Northern Virginia Community College

CRIMINAL AND LEGAL PSYCHOLOGY (PY 213)

Three credits, one semester.

This course will cover the aspects of psychology which specifically relate to police work, the applications of current research about law enforcement, juvenile behavior, and witness credibility. Special police problems, including the relation of mental illness and mental retardation to crime will be included.

Prerequisite: PY 201.

Montgomery College

POLICE SCIENCE (PLCS 100)

Three credits, one quarter.

The student will define the contemporary functions of law enforcement institutions and personnel as compared with previous eras. He will identify the constitutional framework which determines the philosophy, scope and character of these functions.

The student will prepare a written analysis of his reasons for selecting a career in law enforcement. The analysis will include an evaluation of his personal attributes and capabilities related to his perception of the role and functions of law enforcement personnel.

Washington Technical Institute

APPLIED CRIMINAL LAW (PLCS 106)

Three credits, one quarter.

The student will demonstrate that he has acquired comprehensive knowledge regarding constitutional and criminal law as applied to rules of evidence, search and seizure, admissions and confessions, juvenile code, civil rights and the liquor law.

Washington Technical Institute

ADMINISTRATION OF CRIMINAL JUSTICE (PLCS 107)

Three credits, one quarter.

The student will examine the operations of courts, correctional institutions and agencies as they function to meet current needs and demands for efficient and effective service. The student will compare current trends with obsolete practices and philosophy regarding prevention and rehabilitation.

Washington Technical Institute

POLICE ORGANIZATION AND MANAGEMENT (PLCS 108)

Three credits, one quarter.

The student will analyze organization and management principles and concepts as they are implemented in law enforcement agencies. He will acquire insight regarding the relationship between the diversity of objectives which are subject to change and the variation in organizational patterns.

Washington Technical Institute

PRINTING AND PUBLISHING

PRINTING PROCESSES AND TECHNIQUES (PRTG 100)

Three credits, one quarter.

The student will survey all major graphic reproduction processes. This course will help the student determine his major area of interest in the industry.

Washington Technical Institute

PRINTING

Non-credit.

The student will study the basic techniques of printing.

District of Columbia Public Schools

PRINTING

Non-credit, two semesters.

This course offering experiences in camera, layout, stripping and offset press operation. It provides students the opportunity to develop skills necessary for beginning employment and trade extension in the field of printing.

Arlington Public Schools

PRINCIPALS OF TYPOGRAPHY (VT 105)

Three credits, one semester.

The student will study the history of type and identification of type faces; comparison of handset, hot metal, photographic and cold-type composition; copy fitting and marking manuscripts; and analysis of costs and trends in composition methods.

Montgomery College

TYPOGRAPHY (PRTG 116)

Three credits, one quarter.

The student will study the identification and history of type faces, various types of composition currently available, trends in type setting, costs, copy fitting and marking of manuscripts.

Washington Technical Institute

TYPOGRAPHY (ADVD 246)

Three credits, one quarter.

This course is conducted by and in the Printing and Publishing Department. The student will receive the basics of composing the printed page. He will learn to employ both hand-set and machine type, the language and mechanics of type specification and the catalog selection of foundry faces for desired effect.

Prerequisite: ADVD 146.

Washington Technical Institute

LETTERPRESS (PRTG 136)

Three credits, one quarter.

The student will become familiar with machine and hand set type, imposition and lock up of forms, letter press presswork, numbering, scoring and die cutting.

Washington Technical Institute

COMPOSITION I, II (PRTG 144, 145)

Three credits, one quarter each.

PRTC 144 The student will study keyboard operation and major forms of composition. The student will be oriented to the various kinds of equipment utilized in the industry.

PRTC 145 The student will gain further skill in keyboarding techniques on the various types of equipment in the laboratory. Justification, flush left, flush right, centering, and tabular work will be taught. Make-up, correcting and pasting up "ready for camera" will be stressed.

Prerequisite: PRTG 144.

Washington Technical Institute

LETTERING AND TYPEFORM (ADVD 146)

Three credits, one quarter.

The student will be offered both a historic and contemporary view of typeforms and the techniques of basic lettering employing the chiseled pencil, brush and pen. Emphasis will be placed on the selection of suitable typeforms for specific layout problems. The student will also learn the use of pre-prepared type (pressure and machine) as applied to paste-ups and comprehensives with an introduction to the mechanics of type specification and copy mark-up.

Washington Technical Institute

REPRODUCTION TECHNIQUES (ADVD 155)

Three credits, one quarter.

Having learned the basic principles of composition, balance, color, layout, etc. in the prerequisite courses, the student will now learn the techniques of preparing his work for reproduction. After lecture-tours on the various printing processes, the student will then concentrate on his preparation of mechanicals such as paste-ups, type specification (simplified) machine and pressure lettering. He will also learn the techniques of color separation and the use of acetate overlays, registration, zip-a-tone and Bouges paper along with duotone and the "four color process." This course will also provide the student with the basic techniques in the use of scratch board and air brush as reproduction media.

Prerequisite: ADVD 154.

Washington Technical Institute

TECHNICAL ILLUSTRATION (ADVD 216)

Three credits, one quarter.

Having acquired the basic rendering skill in the prerequisite courses listed above, the student will now learn absolute accuracy in product rendering. These renderings will include full exterior, cut-away and exploded views of various manufactured objects. Conceptual and situation drawings will be rendered with the above involving all media previously learned.

Prerequisite: ADVD 116.

Washington Technical Institute

COMPOSITION III (PRTG 146)

Three credits, one quarter.

The student will become fully oriented and proficient in the utilization of the major machines and hand techniques employed by printers and typographers.

Prerequisite: PRTG 145.

Washington Technical Institute

COMPOSITION IV (PRTG 245)

Three credits, one quarter.

In conjunction with an IBM 360 computer, the student will learn how to utilize its facilities as they apply to the composition field. The computer will be used for counting, justification, etc.

Prerequisite: PRTG 146.

Washington Technical Institute

BINDERY OPERATIONS I, II, III (PRTG 124, 125, 126)

Three credits, one quarter each.

PRTG 124 The student will study the techniques of cutting and figuring of paper, collating, stitching of books, plastic binding, punching, padding and operating the buckle type folder.

PRTG 125 The student who wishes to make a career in the binding and finishing area of the printing industry will need this course to learn the finer points of finishing operations.

Prerequisite: PRTG 124.

PRTG 126 The student will gain additional skills beyond those developed in Bindery Operations II. The operation of semi-automatic stitching equipment and perfect binding equipment will be introduced.

Prerequisite: PRTG 125.

Washington Technical Institute

PRINCIPLES OF OFFSET PRESSES (VT 116)

Two credits, one semester.

This course will include application of offset principles of all types and sizes of offset equipment; study of each unit of the press; simple maintenance and safety procedures; and instruments used with offset presses.

Montgomery College

OFFSET DUPLICATING COURSE

Non-credit, sessions vary.

The purpose of this course is to present a systematic program of instruction in the area of offset printing for individuals who are unemployed or underemployed, and whose deficiencies in reading and writing the English language constitute a substantial impairment of their ability to procure and retain employment commensurate with their real ability. This course is designed to increase the trainees opportunities for more productive and profitable employment and making them better able to meet their adult responsibilities. The entire field of graphic arts, instruction in layout and camera reproduction is included in the curriculum.

Opportunities Industrialization Center

OFFSET STRIPPING I, II (PRTG 154, 155)

Three credits, one quarter each.

PRTG 154	The student will learn the assembly of film, stripping procedures and techniques as applied to simple one-color, one-form work.
PRTG 155	The student will study stripping of multicolor, close register and book work. In addition, the student will learn how to use the different register systems. Offset plate making will be part of this course. Prerequisite: PRTG 154.

Washington Technical Institute

OFFSET PRESSWORK I, II (PRTG 164, 165)

Three credits, one quarter each.

PRTG 164	The student will acquire fundamental operating skill with small duplicator type presses. Set-up, operation and maintenance will be stressed.

PRTG 165 The student will develop technique in the operation of offset presses up to 14 x 20 inches. Multicolor, close registration and feeder operation will be emphasized.

Prerequisite: PRTG 164.

Washington Technical Institute

OFFSET STRIPPING III, IV (PRTG 254, 255)

Three credits, one quarter each.

PRTG 254 The student will learn and develop competence in techniques involved in stripping of process color.

Prerequisite: PRTG 155.

PRTG 255 The student will study those areas where he and his instructor feel further attention is needed for his development for a career in offset stripping.

Prerequisite: PRTG 254.

Washington Technical Institute

OFFSET PRESSWORK III (PRTG 166)

Three credits, one quarter.

The student will learn to use equipment in the size range of 14 to 20 inches and larger. The student will be concerned with running and control of process color, setting ink and dampner rollers, preparing new blankets, and proper safety and maintenance.

Prerequisite: PRTG 165.

Washington Technical Institute

OFFSET PRESSWORK IV (PRTG 265)

Three credits, one quarter.

The advanced student will round out his techniques and work habits in the operation of sheet fed lithographic printing presses.

The student will further develop his interests in the area of offset presswork in which he feels a need for more training.

Prerequisite: PRTG 166.

Washington Technical Institute

OFFSET PRESSWORK (TROUBLE SHOOTING) (PRTG 266)

Three credits, one quarter.

Students will confront and solve all major problems of offset presswork. Emphasis will be put upon the logic of trouble shooting.

Prerequisite: PRTG 146.

Washington Technical Institute

SURVEY OF LITHOGRAPHY (8-170)

Three credits, one semester each course (1-year)

This course is primarily for the lithographic apprentice or those desiring understanding of whole lithographic process. *First semester:* Development of lithography; other printing processes and their relationship to lithography; offset photography, including color; plate making; layout and stripping; are included in this semester. *Second semester:* Press work; copy preparation; cold and hot composition and photo typesetting; lithographic ink making and uses; offset papers; including visit to mill in Pennsylvania; binding; advantages and limitations of process; Future trends, lectures and field trips are other added items of interest.

United States Department of Agriculture Graduate School

SURVEY OF LITHOGRAPHY (PRTG 120)

Three credits, one quarter.

The student will study the history, development, current trends, and develop a basic understanding of lithography.

Washington Technical Institute

OFFSET LITHOGRAPHY

Non-credit, one semester.

This is a basic course in offset lithography.

District of Columbia Public Schools

BASIC OFFSET LITHOGRAPHY AND GENERAL PRINTING

Non-credit, one trimester.

This course is primarily designed to acquaint beginning students in the basic principals of art and layout, process camera photography, stripping and plate making, and offset press (multilith) operation. Linotype operation, I. B. M. compositor operation, letterpress work, and screen process printing are also available. The course is designed to meet the specific individual needs and desires of students taking the course.

Alexandria City Public Schools

LITHOGRAPHIC ESTIMATING (8–175)

Three credits, one semester.

This course includes analysis and procedures of cost estimating. Emphasis is on cost finding and its application to preparing estimates. Course emphasis is centered on cost center definitions, determination of materials, and time requirements to produce jobs—large and small. How to review specifications and write up practice estimates.

Prerequisite: Survey of Lithography, or equivalent, or experience in graphic arts.

United States Department of Agriculture Graduate School

PRINTING, LAYOUT AND DESIGN (2–237)

Two credits, one semester.

This course is designed for those who plan, prepare, or procure printing, duplicating, distribution of books, pamphlets, folders, posters, charts, forms, and other printed or duplicated matter; printing processes and printing media; composition; illustrations; including photo-engraving process and photographs; printing design rough layouts, finished layouts, and methods of copy fitting; printing for the Government, including agency responsibility, Government Printing Office responsibility, and agency procedure for procuring printing. Other printing media, including silk screen, ozalid, varitype, cold-type processes, and others are included. Regulations and specifications of the Joint Committee on Printing, Government Printing Office paper catalog, *Style Manual*, printing, and bind regulations are recognized.

United States Department of Agriculture Graduate School

DESIGN WORKSHOP (ADVD 226)

Three credits, one quarter.

While the student will learn two-dimensional techniques in repetitive wallpaper and fabric design employing block print and stencil; his main concentration will be on three-dimensional design in display (i.e. box, bottle, packet shape and label, color, etc.).

Prerequisite: ADVD 224.

Washington Technical Institute

DESIGN PROBLEMS (ADVD 228)

Three credits, one quarter.

The student's individual style and creative ability will be developed to their full potential in this course. The student will use all learned media and techniques to solve design problems given in narrative form only to present in final form camera-ready ads, brochures, conceptual renderings, etc. as will be sought of him in the job situation.

Prerequisite: ADVD 226.

Washington Technical Institute

PRODUCTION MANAGEMENT I, II (PRTG 274, 275)

Three credits, one quarter each.

PRTG 274 In this course, the student learns how to correlate all the elements of the job into one master plan which will produce the finished product. The student will learn how to control, specify, coordinate and follow-up in the production of the printed job.

PRTG 275 The student will be concerned with further development of production management techniques. He will become familiar with the financial aspects of the final printed piece. In addition, the student will work on scheduling of work through the Washington Technical Institute printing plant.

Prerequisite: PRTG 274.

Washington Technical Institute

PRODUCTION PLANNING AND CONTROL (VT 212)

Three credits, one semester.

This course covers preparation of budgets based on job descriptions. Methods of controlling and expediting work through plant from design through bindery and shipping; plant layout and equipment developments in standardization and quality control; are included as material covered.

Prerequisite: Sophomore standing or consent of the instructor.

Montgomery College

ESTIMATING (VT 213)

Three credits, one semester.

The student will learn how to estimate costs of jobs for standard sizes and types. It will include study of paper sizes, weights and uses; suitability of different processes and equipment for specific jobs; and cost for copy preparation, for bindery operations and handling operations.

Prerequisite: Sophomore standing or equivalent work experience and consent of instructor.

Montgomery College

PRODUCTION TECHNIQUES I, II (VT 217, 218)

Two credits, one semester each.

These courses includes individual and group projects involving the planning and execution of selected experimental printing production problems. Projects will include experience in a full range of problems and will use principles learned in other courses. Problems will include budgeting, choice of paper, inks, copy preparation, press and camera work. VT 217 offered first semester; VT 218 offered second semester.

Prerequisite: Sophomore standing.

Montgomery College

PRODUCTION AND PORTFOLIO TECHNIQUES (ADVD 256)

Three credits, one quarter.

The student will receive intensive instruction in production and presentation of the designer's work from drawing board to the printed page. The student will learn the best methods and techniques of presenting his work and himself to prospective employers.

Prerequisite: ADVD 226.

Washington Technical Institute

PSYCHOLOGY

GENERAL PSYCHOLOGY (PSYC 1)

Three credits, one semester.

This course is an introductory course in general psychology.

University of Virginia School of General Studies

PSYCHOLOGY (GENERAL)

Non-credit, one semester.

The basic tenets and theories of psychology will be discussed in this class.

Prince George's County High Schools

GENERAL PSYCHOLOGY

Non-credit, one semester.

Some of the subjects to be considered will be used of tests, data, maturation, learning, and personality adjustment.

Objective is to introduce the student to the field of psychology and its application and limitation.

Washington Saturday College

GENERAL PSYCHOLOGY (PSYC 101)

Three credits, one semester.

An introduction to psychology, emphasizing the problems of learning, thinking, personality and adjustment, and the effects upon them of motivation, sensation, attention, perception, and emotion. Also considered are the subjects of intelligence, aptitudes, communication, and measurement.

Prince George's Community College

GENERAL PSYCHOLOGY (PY 201)

Three credits, one semester.

This course will introduce the student to fields and research methods of psychology. The dynamic factors which will influence human behavior, including personality, intelligence, perceptual processes, learning.

Prerequisite: Second semester freshman or consent of the instructor.

Montgomery College

PRINCIPLES OF PSYCHOLOGY I (SY 201)

Three credits, one quarter.

This course is an introduction to psychology through different subject areas (social, personality, learning, thinking, language, problem-solving) and the contribution they make to our understanding of behavior. It will expose the student to theories and testing of hypotheses derived from them, to depict the methods used that make psychology a science.

Federal City College

PRINCIPLES OF PSYCHOLOGY (SS 121)

Three credits, one trimester.

This course is designed to introduce the student to the scientific theories and principles by which human behavior may be analyzed and understood. Major topics will include psychological methodology, sensation and perception, emotions, conscious and unconscious motivation, learning, thinking, personality, and mental hygiene. Special emphasis is placed upon the importance of developing the ability to deal effectively with others.

Southeastern University

PURCHASING

PRINCIPLES OF PURCHASING (BP-301)

Four credits, one quarter.

An introduction to the function of purchasing whose topics include a purchasing organization, its status in an overall business organization, its conduct and development of techniques, and its relationship with other functions of a typical business enterprise. Some references are made to the concept of materials management and Government practices. The course intends to give the student a foundation for the field of Procurement in industry and government and an appreciation that economics can be effected by prudent spending.

Federal City College

FEDERAL PROPERTY PROCEDURE (4–113)

Two credits, one semester.

This course covers the laws, regulations, principles, and procedures dealing with accountability and control, utilization, and disposal of Federal personal property; accountability systems, capitalization policies, inventory controls, reports, surveys, and inspections; development and application of use, replacement, and preventive maintenance standards; and disposal by transfer, donation, sale, abandonment, and destruction.

United States Department of Agriculture Graduate School

FEDERAL PURCHASING PROCEDURE (4–115)

Two credits, one semester.

This course is intended for those in purchasing work or who wish to enter the field. It also covers the historical and legal background of Federal purchasing, professional concepts in purchasing, current legal requirements, purchasing procedures from open market and Federal sources of supply, and purchasing techniques. Practical application of such requirements through the preparation of purchase documents.

United States Department of Agriculture Graduate School

FEDERAL BUDGETARY PROCEDURE: FORMULATION AND PRESENTATION (4–116)

Two credits, one semester.

The course is designed for students interested in entering budget work, or others in related fields interested in formulation phase of budget procedure. It includes basic legal and institutional framework, concepts, procedures, and practices involved in preparation of budget estimates, justifications and supplementary materials. Emphasis is on budget procedures at bureau or small agency level with preparation of a budget estimate for a hypothetical government agency.

Prerequisite: Familiarity with basic concepts and terminology used in fiscal, accounting, or other financial operations of the Federal Government.

United States Department of Agriculture Graduate School

FEDERAL BUDGETARY PROCEDURE: EXECUTION AND FUND CONTROL (4–118)

Two credits, one semester.

Course is designed for the student interested in entering budget work, those already in budget work, or others in related fields interested in performance phase of budget procedure. It covers the systems of administrative control under the Antideficiency Act, allotments, apportionments, review of progress in relation to financial plans, related reports, and other aspects of budgetary control over appropriations and funds, problems and discussion illustrating various steps of budget execution process at bureau or small agency level and review of basic laws, regulations, concepts, and terminology involved.

Prerequisite: Familiarity with basic concepts and terminology used in fiscal, accounting, or other financial operations of the Federal Government.

United States Department of Agriculture Graduate School

GOVERNMENT PROGRAMS AND THE PROCUREMENT PROCESS (BP–302)

Four credits, one quarter.

This course traces the process of the conception and planning of a program, its justification, budgeting, funding, establishment of individual requirements under the program, the planning for attainment of the requirements, whether use of "In House" capabilities or procurement from outside sources, preparation of work statements and specifications and initiation of the procurement request. It will include the procurement planning and preparation of the solicitation for bids or proposals from industry, and non-profit organizations.

Federal City College

GOVERNMENT PROPERTY MANAGEMENT (BP-404)

Four credits, one quarter.

This course is a study of the Government's requirements for accountability of property by its agencies under its property management laws and regulations with emphasis on the control of property furnished to its contractor or acquired by them under cost type contracts.

Federal City College

PURCHASING AND MATERIALS MANAGEMENT (BUAD 269)

Three credits, one quarter.

This course covers the principles of purchasing and management of inventories including determination of requirements, pricing, source selection, and inventory policy and control.

Northern Virginia Community College

PUBLIC PURCHASING AND CONTRACT LAW (BP-403)

Four credits, one quarter.

This course is a study of the areas of public law and regulations which affect the rights of parties who enter into contractual relationships with Governmental or state agencies and the remedies available to those parties under contractual provisions, administrative procedures and court action.

Federal City College

COST AND PRICE ANALYSIS (BP-405)

Four credits, one quarter.

This course deals with the techniques developed and used as a basis to determine the proper price for a purchased item. Factors which affect the estimating and structuring of a price are analyzed and causes which influence decisions are reviewed. Cost elements are considered and the Government approach to formula methods is studied in detail.

Federal City College

CONTRACT NEGOTIATION (BP–406)

Four credits, one quarter.

This course defines contract negotiation, when it is to be used, what can be negotiated, the preparation necessary for negotiation, the strategy and tactics employed, the relative positions of strength in negotiation and the legal restrictions imposed by various business and procurement laws.

Federal City College

CONTRACT MANAGEMENT I, II (BP 401, 402)

Four credits, one quarter each.

BP 401 This course studies the structure of the Government's system of contract management as established by the way Government agencies operate; also studied are similar systems used by other governments.

BP 402 This is a continuation of BP–401. It studies in great detail the structure of the Government's system of contract management as established by government Agencies, and the similar systems used by other governments. All functions of the government field services, and their audit agencies will be studies such as HEW, National Science Foundation, and the Atomic Energy Commission.

Federal City College

RADIO, TV AND HI-FI

RADIO AND TELEVISION I, II (ELEC 131, 132)

Four credits, one quarter each.

ELEC 131	The student will learn the theory and practice of black and white TV repair through a study of TV circuits, tuners, IF amplifiers, video amplifiers, synchronizing circuits, high and low power supplies. He will use test equipment for diagnosis of TV trouble and the soldering and hand tools for replacement or adjustment.
ELEC 132	This course is a continuation of ELEC 131.

Washington Technical Institute

HIGH FIDELITY SYSTEMS (ELEC 138)

Four credits, one quarter.

The student will study the impedence coupling between components of high fidelity systems and the theory of the individual components. He will analyze troubles and accomplish repairs on the system and its components, consisting of audio amplifiers, turners, turntables, magnetic recording and playback devices, microphones and speakers.

Washington Technical Institute

PRINCIPLES OF TELEVISION ELECTRONICS (ELEC 249)

Three credits, one quarter.

A lecture-demonstration course that will deal with the special devices and techniques which are associated with monochrome and color, broadcast and industrial television transmission and reception. Specifically included are the standards of American television electronics as set down by the National Association of Broadcasters (NAB). Cameras and television receivers are given special emphasis.

Northern Virginia Community College

READING AND COMPREHENSION

READING

Non-credit.

This course is open to all adult residents of Washington, D.C.

Public Schools of District of Columbia

TECHNIQUES OF READING AND WRITING (EN 101, 102)

Three semester hours in a six semester hour sequence.

The student will gain experience in using the essential tools of communication. Selected readings have been analyzed intensively for both meaning and evaluation. Weekly written assignments will be correlated to develop logical thought in correct and effective expression.

EN 101	This course will pertain to studies in exposition. Prerequisite: Satisfactory achievement in the admissions test.
EN 102	This course will include studies in argumentation, rhetoric and persuation, scientific writing. Introduction to and practice in the methods of library research and writing a research paper. Prerequisite: EN 101 or EN 101X.
EN 101X	The content and requirements are in addition to those of English 101. Two extra class periods a week give students who failed to demonstrate mastery of basic fundamentals the opportunity to remedy their deficiencies.

Montgomery College

READING AND STUDY DEVELOPMENT (ENGL 118)

Three credits, one quarter.

This course is a multi-level reading course with emphasis on structural analysis, critical reading, and study techniques for the development of individual skills; laboratory provides enrichment and application of techniques.

Northern Virginia Community College

REVIEW READING (RPR-1)

Non-credit, one semester.

Emphasis is on improving the reading skills of students who have had or who anticipate having difficulty in reading comprehension.

Montgomery College

READING IMPROVEMENT (ENGL 08)

Five credits, one quarter.

This foundation course is designed using modern techniques, equipment, and materials to increase the student's comprehension, skill, and speed in reading. Students may re-register for this course in subsequent quarters as necessary until the course objectives are completed.

Northern Virginia Community College

READING IMPROVEMENT I-A (ED 450)

Twelve sessions, one semester.

This course is designed for the very slow reader. The course objective is speed, comprehension, and general vocabulary. The student's reading will be tested and analyzed at the beginning and conclusion of the course.

Fairfax County Public Schools

READING IMPROVEMENT

Non-credit, one semester.

This course is an individualized approach to reading improvement based on self-advancement at one's own rate. Starting with the student's present level of reading ability, instruction is geared to meet the individual's needs.

Arlington Public Schools

IMPROVING READING ABILITY (2-95)

Non-credit, one semester.

Developmental reading for average and superior reader will be included in this course. The course is designed to increase selectivity, flexibility, purpose, and speed; individualized training; analysis of reading, vocabulary, and visual abilities to help determine areas needing development; workbook exercises, periodic evaluation of progress, short talks on principles of efficient reading, and practice for individual needs. A final test will be given to determine progress and areas needing further development.

United States Department of Agriculture Graduate School

READING IMPROVEMENT I-B (ED 451)

Non-credit, twelve sessions.

Reading improvement is designed to improve reading speed, comprehension, and general vocabulary. The student's reading will be tested and analyzed at the beginning and conclusion of the course.

Fairfax County Public Schools

READING IMPROVEMENT PROGRAM (V2-095)

Non-credit, six weeks.

This course is designed for adults with average or above-average reading ability. It is taught by a full-time reading professional, and incorporates the latest and most advanced techniques for developing the maximum potential of each individual learner. Instruction is oriented toward on-the-job reading needs of Federal employees. Improvement is determined by a Reading Efficiency Index which combines rate and comprehension, not just speed alone.

Prerequisite: Federal employees in GS grades 5 through 18 have attended. Courses are most beneficial to employees with average or above-average reading ability who need to handle their paper work and correspondence more quickly and efficiently.

Special Programs
United States Department of Agriculture Graduate School

READING SPEED AND COMPREHENSION

Non-credit, eight weeks.

The student will learn to read more rapidly and accurately. The course makes no sensational claims, but promises great improvement through educational laboratory films, Science Research Associates' reading materials, and a text on Reading skills.

Catholic University

SPEED READING

Non-credit, one semester.

This course will aid in teaching the student to read with more speed, efficiency and comprehension.

Prince George's County Public Schools

SPEED READING CLINIC

Non-credit, twenty-four sessions.

This course is designed to develop greater flexibility in a student's rate of reading. The method used has been successfully used for years at universities throughout the country, and by popular commercial speed reading organizations in the Metropolitan area. Special emphasis is placed on comprehension. The average student triples his reading rate of narrative materials and effects a significantly greater speed in expository materials, as well. In determining speeds in materials used, the variable of "readability" level is accounted for and controlled by the instructors.

Arlington Public Schools

RAPID READING

Non-credit, ten weeks.

This course consists of practice in reading with comprehensive checks. Both receptive and reflective questions are discussed and a record is kept of the individual's progress with each type of question. Suggestions are given for vocabulary development and there is opportunity for practice in using context clues for word meaning. Comprehension is emphasized more than speed.

Montgomery County Public Schools

READING SPEED

Non-credit, eight weeks.

This course is geared to help the student read with added speed and comprehension.

Catholic University

SPEEDED READING

Non-credit, eight weeks.

The student will learn to read with more speed, efficiency and comprehension. Under professional guidance, the student will learn to analyze his reading habits. This course is geared to the average adult, to broaden his ability to skim or read carefully, depending on the reading matter.

Young Women's Christian Association

READING IMPROVEMENT

Non-credit, one semester.

This course will provide techniques for improving reading skills; application of selected materials; and out-of-class practice to reinforce and expand these skills. Pre and post tests, including a standardized test, will be administered to measure progress. A measure of reading rate and comprehension will be taken in each class session.

Objective is an increase in reading efficiency on all reading material, especially study-type and work related materials, and a foundation established for continued growth in reading skills.

Prerequisite: Sixth grade reading ability.

Washington Saturday College

RECREATIONAL LEADERSHIP

HISTORY AND PHILOSOPHY OF RECREATION (REC 100)

Three credits, one quarter.

The student will identify and describe the essential elements of recreation, its nature, significance and extent. He will describe the history and development of the recreation movement. The student will acquire fundamental knowledge of the operations of various agencies and recreational organizations.

Washington Technical Institute

HISTORY AND INTRODUCTION TO RECREATION (RC 101)

Three credits, one semester.

History, philosophy and theories of recreation will be included in this course. Also principles and practices which are related to worthwhile use of leisure time in organized public programs of city, county, state, and federal as well as private and commercial agencies.

Montgomery College

HISTORY AND INTRODUCTION TO RECREATION (RECR 151)

Three credits, one semester.

This course is an orientation to recreation with emphasis on the historical and philosophical foundations of recreation and leisure; studies the theories of the field with stress upon the economic, political, technological and social forces affecting recreation; includes the conflicting views and concepts and their bases and implications, trends, agency relationships, types of services and facilities, personnel and professional opportunities in public, private, industrial and commercial areas.

Prince George's Community College

PRINCIPLES OF LEADERSHIP (RC 201)

Three credits, one semester.

An in-depth study of the processes and techniques of leadership in relation to the field of recreational services; delineation and differences between group action and individualization; knowledge of the place, scope, and importance of recreation in the community setting are included in this course.

Montgomery College

RECREATION LEADERSHIP TECHNIQUES AND PRACTICES (RECR 153)

Three credits, one semester.

This course will include a study of the various types of leadership techniques and practices for professional leadership with different age groups and in a variety of settings. Also, this course includes methods of working with children, youth and adults and the organization and conduct of citizen committees and staff relationships. General responsibility and techniques of supervision, including staff working relationships, training and development will be discussed.

Prince George's Community College

RECREATION LEADERSHIP (PR 207)

Four credits, one quarter.

The student will acquire comprehensive knowledge regarding the scope, responsibilities, personality trait requirements, career training requirements, employment possibilities and the recreation leadership necessary in various recreation settings.

Prerequisite: PP 101.

Federal City College

FIELD OBSERVATION (RC 203)

One credit, one semester.

A course designed to properly acquaint the student with the nature and diversity of recreation programs and available services offered by public and private agencies through exposure by direct observation of leadership responsibilities in planning, conducting, and evaluating an activity program.

Prerequisite: RC 101 and RC 201.

Montgomery College

MASS GAMES AND SOCIAL ACTIVITIES (RECR 165)

One credit, one semester.

This course provides techniques and practice in use of games and activities of low organization nature are covered with stress placed on those activities of particular interest to the recreation leader. Consideration is given to selective activities in accordance with age levels and interest of participants, leadership techniques in organizing and directing these activities. Ice breakers, mixers, active and quiet games, and stunts will be included.

Prince George's Community College

MASS GAMES AND SOCIAL ACTIVITIES (RC 102)

Three credits, one semester.

This course will include games of low level or mass organization, and social centered activities. Organization, leadership techniques, and activity skills for planning and directing these activities of elementary school age children. Includes the following: preparty games; ice breakers; mixers; active, quiet and nonsense games, stunts, and tricks.

Montgomery College

CAMPING, COUNSELING AND OUTDOOR EDUCATION (RC 104)

Three credits, one semester.

Camping, counseling, and an overall view of outdoor education will outline this course curriculum. Including the following: History, trends, philosophies and current practices in programming; administrative procedures and organizational concepts of camps; counseling techniques and responsibilities; field experiences, outdoor skills and techniques of the camper.

Montgomery College

RECREATION PROGRAMS: PLANNING AND ORGANIZATION (RECR 251)

Three credits, one semester.

Basic principles which are involved in the organization, promotion, conduct and supervision and evaluation of various types of recreation programs in varied settings. Fundamental consideration will be given to needs, type of facilities, age groups, local customs, climatic factors with particular emphasis on public parks, playgrounds and indoor recreation centers and private building facilities.

Price George's Community College

PROGRAMS, PLANNING AND ORGANIZATION (RC 202)

Three credits, one semester.

This course is a study of principles and applied techniques in the planning and organization of recreation programs offered by community agencies, organizations, and municipalities of county, state, and Federal programs. Emphasis will be placed on budget and other fiscal procedures, organizational patterns, policy guidelines, legal authorizations, and records and reports.

Prerequisite: RC 101.

Montgomery College

PROGRAM PLANNING FOR URBAN RECREATION (PR 309)

Four credits, one quarter.

The student will develop program activities for all age groups. He will consider required facilities and equipment, group composition and community resources; leadership techniques and interpret the role of the supervisor in personnel selection, motivation and evaluation; planning, organization, and operation of a comprehensive recreation program.

Prerequisite: 101, PR 207.

Federal City College

SOCIAL RECREATION (RECR 126)

Three credits, one quarter.

The student will recognize and define the psychological and sociological development differences of children from adolescence through young adulthood. He will demonstrate ability to solve problems and situations of social activities programming. He will demonstrate his leadership abilities through class participation in the planning and direction of social recreation activities.

Washington Technical Institute

ATHLETIC PROGRAMMING AND OFFICIATING (RECR 127)

Three credits, one quarter.

The student will identify and apply the basic principles of sports and athletics, "carry-over" type games and highly organized sports activities. He will develop and demonstrate the techniques of sports officating. They will define, organize and implement a variety of tournaments and league play in sports. The student will demonstrate his abilities through class experience and field work.

Washington Technical Institute

FOLK ART PROGRAMMING (RECR 136)

Three credits, one quarter.

The student will demonstrate that he has developed the basic skill and techniques for organizing festivals, pageants, and mass group recreation programs.

Prerequisite: Successful completion of first-year courses.

Washington Technical Institute

RECREATION LEADERSHIP (RECR 137)

Three credits, one quarter.

The student will identify and define the important aspects of leadership techniques and the personality traits of effective leaders. After a thorough study of the theory and principles of leadership, the student will demonstrate his abilities through class experiences and field work.

Washington Technical Institute

PROGRAM PLANNING AND ORGANIZATION (RECR 147)

Three credits, one quarter.

The student will acquire basic skills and techniques of program development for all age groups. He will analyze the role of the supervisor in the organization and operation of a dynamic comprehensive recreation program; in personnel selection motivation and evaluation; in budget determination, record keeping and public relations.

Washington Technical Institute

ARTS AND CRAFTS (RECR 168)

Three credits, one quarter.

The student will demonstrate basic skills in drawing, color, sculpting and handicrafts. He will develop projects suitable for hobby, vocational or rehabilitative activities. He will acquire sufficient knowledge and skill for supervision of group activities.

Washington Technical Institute

RESPIRATORY THERAPY

RESPIRATORY THERAPY SURVEY (HTIT 100)

Three credits, one quarter.

The student will demonstrate understanding of the following concepts: basic pulmonary anatomy, gaseous composition of the atmosphere and body, physical gas laws. He will prove familiarity with general types of respiratory insufficiency, and show knowledge of the history, manufacture and administration of medical gases by a variety of techniques.

— *Washington Technical Institute*

SECRETARIAL SCIENCE

PERSONAL TYPEWRITING (TY-100)

One credit, one semester.

A beginning course in touch typewriting emphasizing mastery of the keyboard, proper typewriting techniques, and personal-use applications, including term papers, rough draft copy, and short tables. This course is recommended for all students who have not had previous typewriting training except those in curriculums requiring TY 101. Two hours each week.

Montgomery College

BEGINNING TYPING

Non-credit, sessions vary.

This course is designed to help students develop basic skills in typewriting and to obtain an acceptable performance level in production of typewritten material. Emphasis is placed on the development of good typewriting techniques, speed, and accuracy.

Montgomery County Public Schools

BEGINNING TYPING (#B 40020)

Non-credit, sessions vary.

In this course the student will learn the keyboard and develop a speed of 20 words per minute. Average attendance time is 20 hours or until the objective of 20 words per minute is reached.

United States Department of Agriculture
Individual Learning Center

TYPING

Non-credit, one semester.

Course is a basic introductory typing course.

District of Columbia Public Schools

INTRODUCTORY TYPEWRITING I (BUSI 153)

One credit, one semester.

This course is for non-secretarial students. It includes typewriting skills and techniques for keyboard control by touch; skill building exercises and drills, with emphasis on rhythm and accuracy, are stressed; and basic procedures covered include the typing of simple business letters, tabulations, and manuscripts.

Prince George's Community College

INTRODUCTORY TYPEWRITING I (SESC 157)

Two credits, one semester.

This course is for secretarial students. It includes instruction for keyboard control by touch; skill-building drills and exercises, and basic procedures include typing of business letters, manuscripts, and tabulations.

Prince George's Community College

TYPING I

Non-credit, one semester.

This course consists of evening classes in introductory typing.

Prince George's County Public Schools

TYPING

Non-credit, sessions vary.

This course is a non-credit basic instruction in typewriting.

Catholic Archdiocese of Washington

TYPING

Non-credit, sessions vary.

This course is intended for beginners and includes electric and manual machines. Texts are required.

Young Women's Christian Association

TYPING (ELECTRIC AND BUSINESS MACHINE)

Non-credit, one semester.

Evening classes in basic typewriting.

Prince George's County Public Schools

ELEMENTARY TYPEWRITING (TY-101)

Three credits, one semester.

This is a beginning course in touch typewriting with emphasis on keyboard control and skill-building techniques. It covers simple tabulations, manuscripts, introduction to business letters and forms, and fundamental English usage and incorporates knowledge of machine parts, proper manipulation and care of the typewriter. Students who have successfully completed one year of typewriting in high school may not receive credit for this course. Recommended for all students in all curriculums who have not had previous typewriting instruction.

Montgomery College

ELEMENTARY TYPEWRITING I, II, & III (BD 101, 102, 103)

One credit, one quarter each.

This course covers theory and practice; drills of all kinds; punctuation and mechanical arrangement of business correspondence, legal forms tabulating, manuscripts, modern business forms; straight copy timings; and training on both manual and electric typewriters. Students who have had one year of typing may receive credit for BD 101 only upon recommendation of the Business Education faculty.

Federal City College

TYPING I (BEGINNERS)

Non-credit, one trimester.

Students are taught the keyboard by the touch system. They are also taught the ability to use all parts of the typewriter and to type simple problems with speed and accuracy. Accurate typing at the rate of 35–40 words per minute is the goal.

Alexandria City Public Schools

TYPEWRITING I-A (ED 601)

Non-credit, sixteen sessions.

Course consists of introduction of the keyboard and basic typewriting knowledge. Gregg Typing I Text Kit—$4.00.

Fairfax County Public Schools

TYPING I

Non-credit, sessions vary.

This course is designed to help students develop basic skills in typewriting and to obtain an acceptable performance level in production of typewritten material. Emphasis is placed on the development of good typewriting techniques, speed, and accuracy. The content includes learning the keyboard by the touch system, typing letters, outlines, tabulation problems, manuscripts and carbon copy work.

Montgomery County High Schools

TYPEWRITING I (SECR 111)

Three credits, one quarter.

This course is an introduction to keyboard with emphasis on good technique and machine mastery; letter format and styles, tabulation and centering, manuscript typing.

Northern Virginia Community College

TYPING I

Non-credit, one semester.

This course includes keyboard introduction and typewriting fundamentals, and is for those who have had no previous typing instruction.

Arlington Public Schools

DYNAMIC TYPING

Non-credit, one semester.

This is an accelerated program for the training of typists. It utilizes the latest computerized audiovisual equipment and programmed instruction, and turns out skilled typists in a remarkable short period of time.

Arlington Public Schools

INTRODUCTORY TYPEWRITING II (BUSI 154)

One credit, one semester.

This is a course for non-secretarial students. It helps to develop greater proficiency in typing skills. Areas covered will be letter styles, letter production, fill-in forms, legal forms, tabulation, and increased emphasis on speed and accuracy.

Prerequisite: BUSI 153.

Prince George's Community College

INTRODUCTORY TYPEWRITING II (SESC 158)

Two credits, one semester.

This is a course for secretarial students. It is a continuation of SESC 157, in which typewriting skills and techniques are further developed and speed with accuracy and control is stressed. Basic procedures include business letters, rough drafts, manuscripts, and special forms.

Prerequisite: SESC 157 or equivalent training.

Prince George's Community College

CLERK-TYPING COURSE

Non-credit, sessions vary.

The aim of this course is to train individuals who are unemployed or underemployed for placement in employment in the area of clerk-typing.

This course is designed to meet the needs of the beginner typist as well as an individual who has had some exposure to training in the clerical area.

The curriculum is divided into the following major areas of training: typing, business machines, filing procedures, business

English, business mathematics, language arts and test preparation.

Opportunities Industrialization Center

CLERK TYPIST I (ED 611)

Non-credit, one semester.

This course is designed to provide training for the job cluster, typing and related occupations. It provides a framework for understanding the basic office concepts and fundamental business communications, business math, business terminology, office machines, and record keeping.

Prerequisite: Beginning Typing.

Fairfax County Public Schools

INTERMEDIATE TYPEWRITING (TY 102)

Three credits, one semester.

Emphasis is placed on skill-building techniques and development of speed and accuracy and on production typewriting of business letters, business forms, rough drafts, tabulated reports, and special reports.

Prerequisite: TY 101 or equivalent.

Montgomery College

TYPING II

Non-credit, one semester.

This course consists of evening classes and is a continuation of Typing I.

Prince George's County Public Schools

TYPEWRITING I-B (ED 602)

Non-credit, fifteen sessions.

Course is intended for students familiar with the touch method of typewriting. Gregg Typing II Text Kit, $4.40.

Fairfax County Public Schools

TYPING II (INTERMEDIATE)

Non-credit, one trimester.

Students are taught to increase speed and accuracy and to maintain a minimum of 40 words per minute. Skill drives and technique drills are emphasized.

Alexandria City Public Schools

TYPEWRITING II-A (ED 603)

Non-credit, fifteen sessions.

For students who type 25–30 wpm on a five-minute writing with a maximum of 3 errors.

Fairfax County Public Schools

TYPING II

Three credits, one semester.

The course is planned to help students further develop typing skills and to apply them with a high degree of vocational competence. The content includes advanced training in the material covered in Typing I.

Montgomery County Public Schools

TYPING II

Non-credit, one semester.

Skill Development and Keyboard Review are covered for those who have had typing or those who desire to review typing skills and techniques in preparation for advanced training.

Arlington Public Schools

TYPEWRITING II (SECR 112)

Three credits, one quarter.

This is a continuation of skill building with emphasis on standards required to meet job requirements in production typing.

Prerequisite: SECR 111 or departmental permission.

Northern Virginia Community College

TYPING III, IV (ADVANCED)

Non-credit, one trimester.

This course is for persons interested in increasing speed and accuracy for personal reasons, for job promotion, or for civil service examination, which is given periodically during the year. (Intensive training for civil service is given.)

Alexandria City Public Schools

TYPING III

Non-credit, one semester.

Course consists of evening classes and is a continuation of Typing I and II.

Prince George's County Public Schools

TYPEWRITING III, IV (SECR 113, 114)

Three credits, one quarter each.

SECR 113	This course consists of skill development with high standards required to meet job requirements in production typing. Prerequisite: SECR 112 or departmental permission.
SECR 114	This course covers production typing of advanced problems involving rough drafts, tabulations, reports, and specialized business forms.

Northern Virginia Community College

ADVANCED TYPEWRITING (TD-103)

Three credits, one semester.

Included in this course are the basic and production typewriting skills required for vocational preparation. Also covered are a wide variety of letters, forms, and reports with emphasis on preparation of accounting, legal, medical, technical, and other special papers. The course also includes communication skills as applied to the typewriter.

Prerequisite: TY–102.

Montgomery College

ADVANCED TYPEWRITING (BD 201)

Two credits, one quarter.

Course covers production typing, speed, accuracy, figures, problems and projects with emphasis on timed office production standards.

Prerequisite: BD 101, 102, 103, or two years of high school.

Federal City College

REFRESHER TYPING

Non-credit, one semester.

Speed Development with emphasis on preparation of business and professional forms and communications. For those who have completed Typing I and Intermediate Typing and/or those who have attained a speed of 30 words a minute.

Arlington Public Schools

REFRESHER TYPING (#B 40019)

Non-credit, sessions vary.

This course is designed to improve speed and accuracy of typists, in addition to increasing production capabilities. A student is pretested and a goal is set for him. Interim and final test mark student progress and are used to certify for Civil Service purposes.

United States Department of Agriculture
Individual Learning Center

MTST TYPING PROGRAM

Non-credit, one semester.

The IBM Magnetic Tape Selectric Typewriter (MTST) introduces the student to the benefits of new magnetic tape typing. Work can be completed faster and more easily with magnetic recording. A perfect tape is created which produces a perfect copy, with no need to erase. Recorded material is played back automatically from the tape at 130 wpm, saving time and money. Students enrolling for this course should have a typing speed of approximately 40–45 wpm and the ability to follow written instructions and learn quickly.

Arlington Public Schools

MAGNETIC TAPE SELECTRIC TYPEWRITER (SECR 219)

Three credits, one quarter.

This course covers the operation of automatic typewriter, procedures for recording and playing back from tapes, revision and updating of tapes and merging information from two tapes.

Prerequisite: Departmental permission.

Northern Virginia Community College

LEGAL TYPEWRITING (ED 607)

Non-credit, fifteen sessions.

This course is designed to upgrade typewriting skills for use in legal offices or legal departments.

Fairfax County Public Schools

EXECUTIVE TYPEWRITING (SECR 216)

Three credits, one quarter.

This is a further development of speed and accuracy on production typing with emphasis on employment standards. Instruction is also given in use of the executive style typewriters, reports, tabulations, statistical materials and justified copy.

Prerequisite: SECR 113 or departmental permission.

Northern Virginia Community College

TYPEWRITING SKILL BUILDING (SECR 217)

Three credits, one quarter.

This course is a further development of speed and accuracy on production typing with emphasis on employment standards. Preparation for employer's secretarial placement examinations.

Prerequisite: SECR 113 or departmental permission.

Northern Virginia Community College

GREGG SHORTHAND FOR BEGINNERS (JUBILEE METHOD)

Non-credit, fifteen weeks.

This course will enable the student to take simple dictation in 15 weeks. Home study is absolutely essential. Text required.

Young Women's Christian Association

SHORTHAND

Non-credit, sessions vary.

This is a basic shorthand course held in the evening for District of Columbia Residents.

Catholic Archdiocese of Washington

INTRODUCTORY SHORTHAND I (SESC 151)

Three credits, one semester.

This course will concentrate on building a shorthand vocabulary, acquiring facility in reading and dictation on practiced and new materials. Four hours.

Prerequisite: Concurrent enrollment in SESC 157.

Prince George's Community College

BEGINNING SHORTHAND (#B 40021)

Non-credit, sessions vary.

Students will learn a new system of shorthand which utilizes the alphabet and over 100 "short forms." It does not require the student to learn a new alphabet. This is an excellent opportunity for a clerk-typist to take a first step on her way to becoming a certified stenographer. This course takes 16 hours to complete. Students will attend for one hour each day for 16 consecutive working days. Upon completion of the course students will be able to take dictation between 50 and 60 words per minute.

United States Department of Agriculture
Individual Learning Center

SHORTHAND I

Non-credit, one semester.

This is an introduction to shorthand theory (Gregg Kit Series), for those students with no previous shorthand instruction.

Arlington Public Schools

SHORTHAND

Non-credit, one semester.

Beginning, intermediate and advanced shorthand. Open to all adult residents of Metropolitan Washington, D.C.

District of Columbia Public Schools

SHORTHAND I (GREGG)

Non-credit, one semester.

This course consists of evening classes in Gregg shorthand for beginners.

Prince George's County Public Schools

SHORTHAND I (SECR 121)

Four credits, one quarter.

This is a presentation of shorthand principles in Gregg Diamond Jubilee Series with emphasis on basic reading and writing skills, associated vocabulary and grammar.

Corequisite or prerequisite: ENGL 101.

Northern Virginia Community College

GREGG SHORTHAND I (4–129)

Three credits, one semester.

This course covers the theory of Gregg Shorthand jubilee with beginning dictation on new and familiar material.

United States Department of Agriculture Graduate School

GREGG SHORTHAND I–A (ED 615)

Non-credit, sixteen sessions.

This course uses the Gregg Shorthand Diamond Jubilee Method for beginners. Gregg Shorthand I Text Kit—$6.25. Shorthand multiple channel electronic lab will be used.

Fairfax County Public Schools

SHORTHAND I

Non-credit, one trimester.

This course emphasizes all Gregg theory, including brief forms and special forms. Also included is an introduction to dictation and transcription. Students are expected to attain a speed of 60 words per minute.

Alexandria City Public Schools

SHORTHAND I

Three credits, one semester.

This course includes the fundamental principles of Gregg Shorthand Simplified and is designed to develop student competence in taking dictation at varying rates of speed, transcribing the material with accuracy. General secretarial procedures, related business practices and business vocabulary are included.

Montgomery County Public Schools

ELEMENTARY SHORTHAND I, II, III (BD 110, 111, 112)

Three credits, one quarter each.

These courses on Gregg Diamond Jubilee Shorthand will include the theory of shorthand and practical applications in sentence and paragraph dictation. Elementary shorthand I, II and III should be taken concurrently unless the student has had the equivalent. Students with one year of high school shorthand may receive credit for BD 110 upon recommendation of instructor.

Federal City College

SHORTHAND (ST 101, 102)

Four credits, one semester each.

The first course covers the principles of Gregg Diamond Jubilee shorthand.

ST 101 Elementary: Building a shorthand vocabulary; facility in reading shorthand outlines; dictation on practiced and new materials.

ST 102 Advanced: Gregg theory is reviewed. Development of accuracy and gradual attainment of speed in taking dictation and transcribing business letters is included.

Prerequisite: Concurrent enrollment in TY 101–102, or equivalent. Five hours each week.

Montgomery College

GREGG SHORTHAND I-B (ED 617)

Non-credit, fifteen sessions.

The Gregg Theory is reviewed and reinforced. Dictation speed is at 40 wpm. Gregg Shorthand II Text Kit—$6.50.

Fairfax County Public Schools

SHORTHAND I (ADVANCED)

Non-credit, one semester.

Course consists of evening classes in advanced shorthand.

Prince George's County Public Schools

INTRODUCTORY SHORTHAND II (SESC 152)

Three credits, one semester.

Basic learnings are reinforced and the development of accuracy and speed in taking dictation and transcribing is emphasized. Four hours a week.

Prerequisite: SESC 151 or equivalent training, concurrent enrollment in SESC 158.

Prince George's Community College

SHORTHAND I

Non-credit, one semester.

This course provides beginning dictation on new and familiar material using the principles of Gregg shorthand, increasing mastery of Gregg shorthand through review and drill, and minimum dictation speed of 60–80 words per minute attained.

The objective of the course is to give the student a thorough knowledge of Gregg shorthand principles together with the ability to construct shorthand outlines for a wide vocabulary of moderate difficulty.

Washington Saturday College

SHORTHAND II

Non-credit, one semester.

This is a review of theory, brief forms, word beginnings and endings, preliminary phrasing, and extensive dictation practice, using general business and governmental material. Sample Civil Service test material is provided. Minimum dictation speed of 80 words per minute is attained.

The objective is to increase the student's skill in using Gregg shorthand, and to accurately transcribe non-technical subject matter covering a broad range of business activities within both government and private industry.

Prerequisite is Shorthand I or at the discretion of the instructor.

Washington Saturday College

SHORTHAND II (INTERMEDIATE)

Non-credit, one trimester.

This course is designed for students who have completed Gregg Shorthand I. It also provides a complete theory review and increases speed and it is designed to develop the ability to construct new outlines from dictation.

Alexandria City Public Schools

SHORTHAND II

Non-credit, one semester.

This is a review of Shorthand Theory and an Introduction to new matter dictation. It is for those students who have had recent, previous instruction or those who have completed Shorthand I.

Arlington Public Schools

SHORTHAND II (SECR 122)

Four credits, one quarter.

This is a reinforcement of shorthand principles, further development of general business vocabularies and English usage. It includes general business dictation.

Prerequisite: SECR or departmental permission.

Northern Virginia Community College

GREGG SHORTHAND II (4-130)

Three credits, one semester.

The purpose of this course is to increase the mastery of principles of Gregg Shorthand jubilee through review and drill. Minimum dictation speed of 60 words a minute attained, with accurate transcription on new standard material.

Prerequisite: Gregg Shorthand I, or equivalent.

United States Department of Agriculture Graduate School

GREGG SHORTHAND II-A (ED 618)

Non-credit, fifteen sessions.

Emphasis is placed on speed development from 60-80 wpm. Civil Service Certificate of Proficiency shorthand tests are given. Gregg Transcription, Diamond Jubilee Series Text and Transcript—$7.00.

Fairfax County Public Schools

SHORTHAND II

Three credits, one semester.

This is a refresher course for adults who know shorthand and wish to improve their skills. The course will consist of transcription, theory review and dictation from 60-120 words per minute.

Montgomery County Public Schools

GREGG SHORTHAND II-B (ED 619)

Non-credit, fifteen sessions.

This course is designed for speed development with the range of 80-120 wpm, transcription, and reinforcement of theory as needed. Help will be given to students who have had Gregg Shorthand Anniversary or Simplified systems. Civil Service Certificate of Proficiency shorthand tests are given.

Fairfax County Public Schools

SHORTHAND II (GREGG)

Non-credit, one semester.

Course consists of evening classes in a continuation of Shorthand I.

Prince George's County Public Schools

INTERMEDIATE SHORTHAND AND TRANSCRIPTION (SESC 153)

Four credits, one semester.

This course is a review of basic shorthand and English fundamentals. It is a development of shorthand writing speed and rapid transcription rate and continued development of typewriting skill and techniques. Six hours.

Prerequisite: SESC 152 and 158 with a grade of "C" or better or equivalent training.

Prince George's Community College

SHORTHAND III (ADVANCED)

Non-credit, one semester.

Course consists of evening classes and is a continuation of Shorthand II.

Prince George's County Public Schools

SHORTHAND III

Non-credit, one semester.

Course covers Speed Development and Transcription and is for those students taking dictation at 60 words a minute or better, or those who are preparing for Civil Service and other employment opportunities.

Arlington Public Schools

SHORTHAND III (SECR 123)

Four credits, one quarter.

Course provies increased speed in general business dictation and introduction of specialized business dictation with emphasis on vocabularies.

Prerequisite: SECR 122 or departmental permission.

Northern Virginia Community College

GREGG SHORTHAND III (60-80 WORDS) (4–225)

Non-credit, one semester.

This course is a review of theory; brief forms, word beginnings and endings; preliminary phrasing; extensive dictation practice, using general business and governmental material; in-class and outside transcription; sample Civil Service test material; and minimum dictation speed of 80 wpm attained.

Prerequisite: Gregg Shorthand I and II, or equivalent, and minimum speed of 60 wpm on new standard material.

United States Department of Agriculture Graduate School

SHORTHAND III–IV (ADVANCED)

Non-credit, one trimester each.

This course is planned to fill the community need for preparing students who wish to take the test for civil service or private employment. Students are trained to take dictation from 80–120 words per minute.

Alexandria City Public Schools

GREGG SHORTHAND IV (80–100 WORDS) (4–226)

Non-credit, one semester.

This course is for the shorthand writer of any system with dictation speed of 80 words a minute and ability to transcribe letters and reports accurately.

United States Department of Agriculture Graduate School

GREGG SHORTHAND V (100-120 WORDS) (4-227)

Non-credit, one semester.

This course is for the shorthand writer of any system with dictation speed of 100 words a minute. High speed shortcuts. Civil Service tests and Gregg awards are included.

United States Department of Agriculture Graduate School

ADVANCED SHORTHAND AND TRANSCRIPTION (SESC 154)

Four credits, one semester.

A continuation of SESC 153. Emphasis is placed on the production of mailable transcripts. Dictation materials will cover a wide range of subjects and are directed toward broadening the student's vocabulary. Six hours.

Prerequisite: SESC 153 with a grade of "C" or better or equivalent training.

Prince George's Community College

GREGG SHORTHAND REVIEW (JUBILEE METHOD)

Non-credit, fifteen weeks (30 hours).

This is an intermediate refresher for skill and speed, theory and dictation.

Young Women's Christian Association

REFRESHER SHORTHAND

Non-credit, one semester.

A brief and comprehensive review for those students who are "rusty". (For those who have not taken a shorthand course within the past two years.)

Arlington Public Schools

REFRESHER SHORTHAND (#B 40018)

Non-credit, sessions vary.

This course is designed for stenographers who need to regain speed in taking dictation. The student is pre-tested, and a goal is set. (Many students set the Civil Service standard of 80 words per minute, with 12 or fewer errors as their goal.) Interim and final test mark student progress and are used to certify the student for Civil Service purposes.

Refresher Shorthand is also the follow-up course to Beginning Shorthand. It will increase the student's speed, as well as reinforce the new skill.

United States Department of Agriculture
Individual Learning Center

GREGG SHORTHAND REFRESHER (ED 616)

Non-credit, fifteen sessions.

This course is for students who have any Gregg Shorthand and wish a general review and beginning dictation. Desired goal is a minimum of 40 wpm, but usually students are able to reach 50–60 wpm on the completion of the course. If student, at any time, was able to take 60 wpm or better, register for Shorthand I-B. Gregg Shorthand I Text Kit—$6.25.

Fairfax County Public Schools

ADVANCED SHORTHAND FOR CERTIFICATE PROGRAM (ST 103)

Five credits, one semester.

In this course the Gregg theory is reviewed. Also included is the development of accuracy and gradual attainment of speed in taking dictation and transcribing business letters. Two laboratory hours for machine transcription are provided. Course is required of those students seeking a secretarial certificate and open to other students. Seven hours a week.

Montgomery College

HIGH SPEED SHORTHAND

Non-credit, one semester.

This course is designed for the individual who wishes to build his shorthand speed. The shorthand system is optional as long as the student has a thorough knowledge of the system he writes. A review of grammar will be included stressing spelling, punctuation, etc.

Montgomery County Public Schools

PROFESSIONAL SHORTHAND

Non-credit, one semester.

This course covers speed development and transcription. It is intended for those students taking dictation at 80 words a minute or better. Emphasis will be on improvement of transcription skills.

Arlington Public Schools

SHORTHAND (ABC)

Non-credit, one semester.

This course consists of evening classes in ABC shorthand fundamentals.

Prince George's County Public Schools

ABC STENOSCRIPT

Non-credit, one semester.

ABC Stenoscript is an abbreviated method of recording dictation. The goal for students is 80 words a minute and civil service certification.

Arlington Public Schools

STENOSCRIPT ABC SHORTHAND

Non-credit, one semester.

This 40-hour course will be completed in one semester. If you apply yourself you should be able to reach a speed of 80 words per minute. The first half of the course covers theory, basic rules, high frequency words and letter groups, prefixes and suffixes.

The entire last half of the course is devoted to dictation and transcription.

Montgomery County Public Schools

ABC STENOSCRIPT (ED 621)

Non-credit, fifteen sessions.

This is a method of taking dictation using the letters of the alphabet to write what is heard. Dictation goal is 80 wpm. ABC Shorthand-Stenoscript Text, $7.50.

Fairfax County Public Schools

STENOTYPE I (ED 622)

Non-credit, fifteen sessions.

This is the theory of machine shorthand, and is offered for those who are interested in recording or transcribing Stenotype notes.

Fairfax County Public Schools

STENOTYPE

Non-credit, one semester.

This is machine shorthand for beginners and is offered for those who wish to learn the easiest and most modern system for recording dictation.

Arlington Public Schools

STENOTYPE ADVANCED

Non-credit, one semester.

This is machine shorthand for those who have completed the basic theory and who desire to build speed. Additional laboratory fee, $4.

Arlington Public Schools

DICTATION PRACTICE

Non-credit, eight weeks (16 hours).

This course will improve stenographic skills using 60–90 wpm on general material, or 90–110 wpm on some Civil Service material.

Young Women's Christian Association

DICTATION AND TRANSCRIPTION (ST 201)

Four credits, one semester.

This course is a development of sustained writing speed. It provides training in the complex activities of transcription—shorthand, typewriting, spelling, capitalization, punctuation, grammar, and proof reading. Special emphasis is placed on building a business vocabulary and on vocational dictation and transcription.

Prerequisite: ST 102 or equivalent. Three hours of lecture and two hours of laboratory each week.

Montgomery College

DICTATION AND TRANSCRIPTION (BD 210)

Three credits, one quarter.

The course provides advanced principles and phrases; dictation and transcripts covering vocabularies of representative businesses; and legal forms, newspapers and magazine articles.

Prerequisite: BD 110, 111, 112.

Federal City College

MACHINE TRANSCRIPTION (SECR 256)

Three credits, one quarter.

This is an introduction to modern transcription incorporating good listening techniques, grammar, punctuation, and correct business English. Emphasis is on mailability of copy with good production rates.

Prerequisite: SECR 216 or departmental permission.

Northern Virginia Community College

TRANSCRIPTION I, II, III (SECR 221, 222, 223)

Three credits, one quarter each.

SECR 221	Transcription I is a review of principles of shorthand, development of vocabulary and phrases, speed building on general business dictation and transcription. Prerequisite: SECR 113 and SECR 123 or 133.
SECR 222	Transcription II is a continuation of speed building with emphasis on particular areas of general business, developing special vocabularies, phrases, and shortcuts. Emphasis is also on spelling, grammar and other transcription skills. Prerequisite: SECR 221 or departmental permission.
SECR 223	Speed building in typical business dictation with speed and accuracy in transcription from shorthand notes. Preparation for employers' secretarial placement examinations. Prerequisite: SECR 222 or departmental permission.

Northern Virginia Community College

DICTATION AND TRANSCRIPTION FOR MEDICAL SECRETARIES (ST 202)

Four credits, one semester.

This course provides dictation on matters containing medical terminology and its accurate transcription. Emphasis is placed on building a medical vocabulary.

Prerequisite: ST 102 or equivalent.

Montgomery College

MEDICAL REPORT TRANSCRIPTION (MEDT 107)

Four credits, one quarter.

The course covers the operation and care of dictating and transcribing machines; development of skill in the transcription and preparation of reports which make up the medical record.

Prerequisite: MEDT 106 and ability to type 40 words per minute accurately.

Northern Virginia Community College

(LEGAL) TRANSCRIPTION I, II (SECR 224, 225)

Three credits, one quarter each.

This course provides for legal secretary preparation and skill in taking dictation and transcribing material involving legal shorthand forms and phrases. Course also provides proficiency in use of legal vocabulary, forms, and procedures.

Prerequisite: SECR 221 or departmental permission.

Northern Virginia Community College

LEGAL TERMINOLOGY—DICTATION AND TRANSCRIPTION (ED 629)

Non-credit, fifteen sessions.

The purpose of this course is to provide experience in the dictation and transcription of legal material.

Fairfax County Public Schools

DICTATION AND TRANSCRIPTION FOR LEGAL SECRETARIES (ST 205)

Four credits, one semester.

This course focuses on the development of legal shorthand vocabulary; dictation and transcription of legal materials and handling of legal forms and procedures.

Prerequisite: ST 102 or equivalent. MG 201 (Business Law) must be taken before or concurrent with ST 205.

Montgomery College

SECRETARIAL TRAINING (ST 204)

Four credits, one semester.

The course provides guidance in the procedures basic to a secretarial career, including office diction and transcription, filing, handling incoming and outgoing mail, telephone usage, operation of duplicating and transcribing equipment, and other functions demanded of the beginning office worker.

Prerequisite: ST 201, ST 202 or ST 205.

Montgomery College

SECRETARIAL PRACTICE (SESC 255)

Four credits, one semester.

This course includes the operation of calculating and duplication machines, current filing procedures, dictaphone transcription, personnel relationships and other functions demanded of the secretary. Special vocabularies are provided if desired. Six hours. Laboratory fee, $3.

Prince George's Community College

SECRETARIAL PROCEDURES I, II, III (SECR 241, 242, 243)

Three credits, one quarter each.

SECR 241 This is a course in the operation of stencil and spirit duplicating machines, preparation of copy for reproduction of offset, stencil and spirit process; criteria for selecting a duplicating process, and study of type styles, paper, typewriter ribbons and carbon paper.

Prerequisite: SECR 113.

SECR 242 Emphasis is placed on the secretary's routine office responsibilities, including mail handling, communications services, telephone techniques, and the use of reference materials. Emphasis is also placed on the application of skills gained in typewriting and shorthand.

Prerequisite: SECR 241.

SECR 243 This course provides continued emphasis on the secretary's office responsibilities, including handling of banking transactions, maintaining records on securities transactions, travel arrangements, planning of office layouts, and personnel policies and practical experience in solving office problems.

Prerequisite: SECR 242.

Northern Virginia Community College

SECRETARIAL TECHNIQUES

Non-credit, one semester.

This course is offered for secretaries desiring advancement to executive secretarial positions. Activities to be studied include:

(1) written and oral communication, (2) human relations, (3) personnel problems, and (4) developing executive style.

Arlington Public Schools

SECRETARIAL PROBLEMS (BD 320)

Four credits, one quarter.

Course will cover the duties and problems of the secretary in business and other professions; relation to employer and fellow employees; and office supervision.

Prerequisite: (senior standing for Office Administration majors).

Federal City College

OFFICE SKILLS

Non-credit, sessions vary.

The course provides basic instruction in the methods and procedures used in office tasks.

Catholic Archdiocese of Washington

OFFICE TECHNIQUES (BUSI 151)

Two credits, one semester.

This is a course for non-secretarial students. It provides an introduction and basic instruction in the use of calculating machines, filing procedures, keypunch, and duplication processes. Three hours.

Prince George's Community College

SECRETARIAL ACCOUNTING (ST 203)

Three credits, one semester.

The focus of this course is on the fundamental principles of accounting as applied to records and books kept by a secretary; the accounting cycle, banking procedures, preparation of financial statements, special journals, and ledgers are studied. Practice sets are used. Special application is made for medical and legal secretaries. Two hours of lecture and two hours of laboratory each week.

Montgomery College

LEGAL SECRETARIAL PROCEDURES I, II (SECR 264, 265)

Three credits, one quarter each.

These courses provide instructions in law office procedures, law office filing and record keeping, extension of legal vocabulary, court rules, reference materials, preparation of forms and pleadings.

Prerequisite: SECR 241.

Northern Virginia Community College

UNDERSTANDING MEDICAL TERMINOLOGY (ED 669)

Non-credit, fifteen sessions.

This is a preparatory course for students interested in the medical secretarial and/or medical coding clerk fields. It gives the understanding of the fundamentals of medical terminology. Understanding Medical Terminology Text—$5.00.

Fairfax County Public Schools

INTRODUCTION TO MEDICAL RECORD SCIENCE (MEDT 110)

Three credits, one quarter.

Course provides an orientation to the medical records field including a history of medical records; organization and functions of the medical record department with emphasis on the role of the medical records technician and interdepartmental relationships.

Prerequisite: MEDT 107.

Northern Virginia Community College

MEDICAL TERMS SIMPLIFIED (1-126)

Two credits, one semester.

Designed for medical coders, librarians, secretaries and those who deal with medical terms.

United States Department of Agriculture Graduate School

OFFICE PROCEDURES (BD 301)

Four credits, one quarter.

Course provides for the most efficient stenographic methods and office practice; filing; advanced dictation; transcripts; reports; and modern office appliances.

Prerequisite: BD 201 and BD 210.

Federal City College

OFFICE PROCEDURES AND SYSTEMS (ED 681)

Non-credit, fifteen sessions.

This course is designed to enable the student to understand work flow and job relationships, to develop a systems vocabulary, to identify and understand office systems, and to train the student to become more orderly and methodical in performing office tasks.

Fairfax County Public Schools

PERSONAL DEVELOPMENT (SECR 156)

Three credits, one quarter.

This is a course designed to develop, enlarge and improve the personality, over-all appearance, ease in handling business and social situations with resulting self-confidence in job interviews, placement and continued employment.

Northern Virginia Community College

AUTOMATION OFFICE PRACTICE

Non-credit, sessions vary.

This is a basic course in the use of automated machines for office tasks.

Catholic Archdiocese of Washington

OFFICE PROCEDURES FOR CERTIFICATE PROGRAM (ST 104)

Three credits, one semester.

Course provides training in the most frequently performed clerical and stenographic duties in business offices. Units of work include the role of the stenographic employee in the office, personality and human relations, filing, handling mail, receptionist and telephone techniques, and other procedures necessary for success in a modern business office.

Prerequisite: ST 101, TY 102, or equivalents.

Montgomery College

VOCATIONAL OFFICE TRAINING

Non-credit (see below)*, one trimester.

Course provides instruction and skill training in operating the various business machines such as calculators, adding machines, duplicators, transcription machines, and data processing machines. Units on filing and office procedures are also included.

*Students may receive up to three credits for class if they work in an approved office. The class is limited to 20 students.

Alexandria City Public Schools

OFFICE MANAGEMENT (BUAD 204)

Three credits, one quarter.

The student will be able to organize and plan the office operation and to analyze systems, procedures and methods of controlling office costs.

The student will also be able to identify the elements of modern personnel practices, effective supervision, and employee-employer communication in order to create proper human relations, and to assess the impact of automation upon office management with an aim towards its adaptability.

Prerequisites: BUAD 104 and BUAD 105.

Washington Technical Institute

RECORDS MANAGEMENT (BD 310)

Two credits, one quarter.

This is a comprehensive course which covers indexing principles, filing procedures and techniques, the establishment of filing systems, selection of equipment and supplies, and solution of records management problems.

Federal City College

RECORDS MANAGEMENT PROCEDURES (4-117)

Two credits, one semester.

Course provides an introduction to the management of records and basic instruction in processing, maintaining, and servicing records. It is designed for the student interested in supplementing his knowledge of mechanics and techniques of records operations, or who desires to enter the records management field. The course also covers selection and proper use of filing equipment and supplies; how to meet needs of management for documentation and information from records; detailed instruction in methods of recording and controlling communications; classifying, coding, indexing, and filing correspondence and other record material; and reference service, including establishment and operation of charge-out and follow-up systems.

United States Department of Agriculture Graduate School

ADVANCED RECORDS MANAGEMENT (4-217)

Two credits, one semester.

This is a course in advanced records management with lectures on applicable management principles and techniques, group discussions of paperwork problems, and case studies illustrating practical solutions. It also covers the history of growth of Federal records, increase of related paperwork problems, and Government efforts to solve them. Federal laws and regulations governing establishment, maintenance, protection, preservation, and disposal of records.

Prerequisite: Records Management Procedure, or qualifying experience at Grade GS-5 or above, or special permission.

United States Department of Agriculture Graduate School

FILING AND RECORDS MANAGEMENT (SECR 136)

Three credits, one quarter.

The course covers indexing principles, filing procedures and techniques as applied to filing systems, establishment of filing system, selection of equipment and supplies, survey of system using electronics and microfilm, solution of records management problems.

Northern Virginia Community College

FILING SYSTEMS AND RECORDS MANAGEMENT (ED 677)

Non-credit, ten sessions.

The emphasis in this course is on filing principles, systems, and techniques of records control. Business Filing and Records Control Text and Practice Set—$6.50.

Fairfax County Public Schools

OFFICE ORGANIZATION AND MANAGEMENT (BD 410)

Three credits, one quarter.

This course provides instruction in scientific office management; organization; arrangement; operation; employment and training of office workers; and efficiency problems, business ethics.

Prerequisite: BD 301.

Federal City College

GENERAL BUSINESS

Non-credit, one trimester.

This course stresses practical matters such as banking services, taxes, insurance, communication, transportation and stocks and bonds. How our free enterprise system works and economic concepts are important understandings developed in this course.

Alexandria City Public Schools

SPEECH

REMEDIAL SPEECH (2-236)

Two credits, one semester.

This practice course is geared to individual guidance in techniques to aid in the correction of specific speech problems.

United States Department of Agriculture Graduate School

SPEECH IMPROVEMENT

Non-credit, one semester.

The student will be given guidance in problem speech areas.

Prince George's County Public Schools

VOICE AND REMEDIAL SPEECH (2-232)

Two credits, one semester.

This is a drill course including word analysis, consonant clarity, phrasing, pausing, pronunciation, and voice: power, pitch, inflection, quality, vitality, and stress.

United States Department of Agriculture Graduate School

VOICE AND DICTION (SD 205)

Three credits, one semester.

The student will learn to work under critical scrutiny to improve articulation and vocalization in speech patterns.

Bowie State College

VOICE AND DICTION (SPCH 004)

Three credits, one semester.

Emphasis is placed upon the improvement of voice, articulation, and phonation. This course may be taken concurrently with SPCH 001.

University College

EFFECTIVE SPEECH

Non-credit, eight sessions.

This Comprehensive course in the fundamentals of public speaking is designed to provide immediate help for the inexperienced speaker and to further assist the speaker who has had training and experience in public speaking, gathering speech material, building and delivering a speech and developing self-confidence.

Montgomery County Public Schools

EFFECTIVE SPEECH (ENGL 130)

Three credits, one quarter.

The student will deliver informal and formal speeches, from notes, on a variety of subjects. He will deliver prescriptive and descriptive speeches, evaluate the speeches of others, and participate in round table and debates. Emphasis is on organization of ideas, purpose, semantics of spoken language, delivery, audience and occasion analysis, and development of confidence. Speeches will be videotaped for analysis and criticism.

Washington Technical Institute

PUBLIC SPEAKING (SPCH 001)

Three credits, one semester.

This course is directed toward the preparation and delivery of short original speeches, outside reading, reports, etc.

University College

PUBLIC SPEAKING

Non-credit, one semester.

This course will instruct the student on effect public speaking.

Prince George's County High Schools

PUBLIC SPEAKING

Non-credit, one semester.

The course is built around definite speech situations, or applications of the principles of speech. Each assignment is planned to give the student a varied speech experience to help realize the wide range of use of the fundamentals of speech. Emphasis is also placed on establishing proper interaction with an audience.

Course objective is to improve the students ability to communicate whether in public speaking or in conversation, listening, or writing.

No prerequisite required.

Washington Saturday College

PUBLIC SPEAKING I, II (E 103, E 203)

Three credits, one trimester each.

E 103 This course covers the substance and format of effective oral communication. Students are trained in the selection and organization of speech materials, the delivery of the speech, audience analysis, impromptu presentations, and vocabulary development. The entire course is practical and not theoretical.

E 203 Provides training in preparing and presenting specialized types of speeches, with emphasis on the principles of argumentation and debate, techniques of the open-forum and panel types of discussion, and the principles of presuasion.

Prerequisite: E 103.

Southeastern University

STATISTICS

INTRODUCTORY STATISTICS (MA 104)

Three credits, one trimester.

Topics covered include: sources of data; collection, presentation, analysis and interpretation of data; probability theory and simple correlations.

(Prerequisite: MA 101).

Southeastern University

INTRODUCTORY STATISTICS (3–126)

Three credits each semester (1-year course).

First Semester: Collection of data, classification and presentation of data in tabular and graphic forms, measures of central tendency, measures of dispersion and symmetry, probability theory, basic probability distributions, sample distributions, statistical estimation, sample distributions, statistical estimation, and sample design. *Second Semester:* Test of Hypotheses, chi-square and other non-parametric methods, F distribution, analysis of variance, regression analysis, simple and multiple correlation, time series analysis and index numbers.

Prerequisite: High school algebra.

United States Department of Agriculture

ELEMENTARY STATISTICS

Non-credit, 10-week course.

This is an elementary course in Statistics designed for those people who need, for whatever reason, an understanding of the basic concepts.

The following topics will be explored:

1. Sets and Functions
2. Elementary Probability Theory
3. Frequency and Probability Distributions
4. Joint Events and Independence
5. The Binomial Distribution
6. Measures of Central Tendency and Variability
7. Sampling Distributions and Point Estimation
8. Normal Populations

9. Hypothesis Testing
10. Population Means Inferences

Montgomery County Public Schools

ELEMENTARY PROBABILITY AND STATISTICS I, II, III (NM 140, 141, 142)

Three credits, one quarter each.

NM 140 The course meets college-wide mathematics requirements beyond NM 102 and is sequential to NM 141; it includes an introduction to the elementary concepts of probability and statistics, counting problems using permutations, and combinations, sample spaces, probability for successive events, presentation and description of data.

NM 141 This course develops statistical concepts and techniques based upon probability concepts from NM 140; includes organization, description, and interpretation of grouped or ungrouped data, computation of descriptive statistics, binamial and normal distributions, and introduction to inferential statistics.

Prerequisite: NM 140.

NM 142 This course will cover topics of statistical inference: to include point estimation and interval estimation, hypothesis testing, correlation, and regression. Examples are to be taken from social, behavioral and natural sciences.

Prerequisite: NM 141.

Federal City College

ELEMENTS OF STATISTICS (MA 103)

Three credits, one semester.

This course will cover frequency distributions, averages, moments, measures of dispersion, the normal curve, curve fitting, regression and correlation.

Prerequisite: MA 112, or MA 118, or equivalent.

Montgomery College

BASIC STATISTICS (# 30004)

Non-credit, sessions vary.

The contents of this course include the fundamentals of satistics: errors, accuracy and approximation; charts for named categories of data; time series; and observation for values of a variable. The student needs only a working knowledge of fractions, ratio and proportion, and simple algebra in order to complete the course successfully.

U.S. Department of Agriculture Individual Learning Center

STATISTICS I (BUAD 214)

Three credits, one quarter.

The student will be introduced to quantitative tools used in the analysis, interpretation, and forecasting of business and economic data. This will involve an analysis of averages, simple linear correlation, regression, indexes, and curve fitting. There is also presented an introduction to central tendency, probability, and analysis of variance.

Prerequisite: MATH 135.

Washington Technical Institute

DESCRIPTIVE STATISTICS I (# A 30005)

Non-credit, sessions vary.

Topics included in this course are population and sample, variables, data arrangement, data presentation, measures of central tendency and measures of dispersion. This course may be taken by anyone with a fairly good math background, including past Basic Statistics students. It is an excellent opportunity for statistical assistants to become more productive through a deeper knowledge of statistics. The course would be equally valuable for professionals in other fields who would find it a useful tool.

U.S. Department of Agriculture Individual Learning Center

DESCRIPTIVE STATISTICS II (# A 30006)

Non-credit, sessions vary.

Topics included in Descriptive Statistics II are: The normal curve, correlation and regression. This course follows Descriptive Statistics I.

U.S. Department of Agriculture Individual Learning Center

BUSINESS STATISTICS (MG 104)

Three credits, one semester.

This course covers variables and graphs, frequency distribution, averages, measures of variability, samplings, tests of hypotheses, index numbers, time analysis, and correlation.

Prerequisite: Any course in mathematics and consent of instructor.

Montgomery College

SYSTEMS ANALYSIS

INTRODUCTION TO SYSTEMS ANALYSIS

Non-credit, one semester.

Emphasis is placed on the function, methods and procedures of the programmer/analyst. Selected cases and problems will be discussed to provide application of techniques and experience in drafting proposed solutions. Field trips to computer installations are planned.

Arlington Public Schools

INTRODUCTION TO SYSTEMS ANALYSIS (ED 686)

Non-credit, one semester.

The student will learn the basic principles and techniques of collecting, recording, organizing, evaluating and using facts about a system and the environment in which it operates.

Prerequisite: Introduction to Data Processing or equivalent.

Fairfax County Public Schools

SYSTEMS ANALYSIS I, II, III (DAPR 281, 282, 283)

Three credits, one quarter each.

DAPR 281 This course will include a study of the overall computer-based systems analysis and design process; information problems of business organization and the inter-relationships of functions; nature of business problem isolation and definition; initial phase of systems analysis and evaluation.

Prerequisite: DAPR 106.

DAPR 280 This course will include a study of systems design and implementation phases related to initial automation; up-grading or revision of business data processing systems; system documentation including summaries for management schedules and cost analysis; equipment selection, acquisition and detailed review of pre- and post-installation considerations.

Prerequisite: DAPR 281.

DAPR 283 The student will gain knowledge in a comparison of presently available hardware and software systems from major vendors; comparative study of features and capabilities; data processing modes and selection of criteria; study of techniques such as PERT, decision and logic tables, simulation and their importance will be included.

Prerequisite: DAPR 282.

Northern Virginia Community College

SYSTEMS ANALYSIS AND DESIGN I, II (GSDP E8, E9)

Three credits, one semester each.

These courses include principles of programming techniques.

University of Virginia School of General Studies

SYSTEMS ANALYSIS AND DESIGN (DAPR 253)

Four credits, one semester.

This course continues the concept of the computer as a problem-solving tool. Using the COBOL language the student is exposed to advanced programming techniques useful to real-world situations. The student will gain a familiarization of data management concepts. The semester concludes with the development of a framework for computer systems analysis and design. Programming problems of increasing complexity are used to reinforce core areas covered.

Prerequisite: DAPR 154, 156, with a grade of "C" or better.

Prince George's Community College

SYSTEMS ANALYSIS AND PROJECT (DAPR 254)

Five credits, one semester.

The objectives of the course are to provide the student with sufficient knowledge in systems analysis and programming and to have the student undertake a data processing project. The project shall be a real problem emanating from an actual data processing situation and the student will design, program and execute the problem project.

Prerequisites: DAPR 251 and 253.

Prince George's Community College

SYSTEMS ANALYSIS AND DESIGNS (EDPM 270)

Three credits, one quarter.

The student will learn to define the system under study, perform the collection of data, analyze the data, evaluate the results, design, propose and present the system. The student will be taught to perform the systems analyst functions in actual systems selected from applications at WTI and nearby companies and agencies. He will study design, document and present the proposed system to a review committee for review and acceptability.

Prerequisites: EDPM 215 and 220.

Washington Technical Institute

TRAINING

HOW TO TRAIN AN EMPLOYEE (ED 910)

Non-credit, five sessions.

Need and responsibility for training—methods of training and learning—demonstrations of methods of training—analysis of basic steps in training. Extensive use of audiovisual materials and passouts.

Fairfax County Public Schools

ADVANCED HOW TO TRAIN EMPLOYEES (ED 924)

Non-credit, five sessions.

A "hands on" practical course for conducting and evaluating effective on-the-job training programs. Extensive use made of audiovisual materials and passouts.

Fairfax County Public Schools

PERSONNEL TRAINING FOR HRI. (BUAD 277)

Two credits, one quarter.

The student will study the principles of human relations at the managerial and supervisory level with emphasis on its application to training in the hospitality industry.

Northern Virginia Community College

VOCABULARY

SPELLING AND BASIC VOCABULARY (2-29)

Non-credit, one semester.

The course is designed to improve spelling by intensive phonic drill and syllable sounds, together with exercises in operation of basic rules of spelling. Memorization of basic list of words not conforming to sound or rule spelling. Secondary aim is to gain proficiency—through spelling and planned vocabulary workbook exercises—of basic vocabulary at level preparatory to Vocabulary Building.

United States Department of Agriculture Graduate School

SPELLING AND VOCABULARY (ED 660)

Non-credit, fifteen sesssions.

This course for business men and women who wish to increase their vocabularies and become better spellers. Emphasis is placed on spelling rules, exception to rules, syllabication, pronunciation, enunciation, and word meanings.

Fairfax County Public Schools

VOCABULARY BUILDING (2-119)

Three credits, one semester.

A study of sources and origins of words to gain insight into present meanings and principles of word formulation, dictionary study, and exercises in word selection will be included in this course. Emphasis is placed on common Latin and Greek roots used in forming English words.

United States Department of Agriculture Graduate School

VOCABULARY BUILDING

Non-credit, ten weeks.

This course will enlarge your vocabulary, through use in sentences and pronunciation.

Young Women's Christian Association

VOCABULARY BUILDING

Non-credit, ten weeks.

At each term you may enter into this progressive course in vocabulary enrichment. Take a trip through new and intriguing phrases and ideas. The instructor provides word lists by subject, spelling, phonic and etymology aids. Parts of speech and parts of words are analyzed. Students will bring in their own interesting word lists and samples of creative, useful writing.

Montgomery County Public Schools

IMPROVING YOUR VOCABULARY

Non-credit, eight weeks.

This course will be an added building block for increasing the student's word power.

Catholic University

DEVELOPING WORD POWER

Non-credit, one semester.

This course is designed to include word structure, word derivation, pronunciation through phonetics, use of dictionaries and language reference books, spelling and sound usage. It will raise the level of your word reservoir. Progress hinges on effective communication.

Arlington Public School

WRITING

EFFECTIVE BUSINESS COMMUNICATIONS (ED 661)

Non-credit, fifteen sessions.

This course is designed for business men and women who want to become more effective in communication skills. Principles of good writing and speaking and emphasis on everyday situations requiring exact, concise, meaningful writing and speaking are essential.

Prerequisite: Spelling & Vocabulary or equivalent.

Fairfax County Public Schools

WRITTEN BUSINESS COMMUNICATION (GSCM E53)

Three credits, one semester.

This course is designed mainly to improve the student's letter-writing ability.

University of Virginia George Mason College

BUSINESS COMMUNICATIONS (BD 220)

Three credits, one quarter.

Presentation of essential principles involved in preparing business letters and other types of business communications will be covered in this course.

Prerequisite: Sophomore standing.

Federal City College

OFFICIAL WRITING (2-226)

Two credits, one semester.

This course is designed for those who have to write as part of their jobs, but who are not necessarily professional writers. It stresses that Government writing, as all writing, should be clear, simple, concise, and easy to understand. Emphasis is placed on eliminating unnecessary words and phrases in official writing. The course will cover many forms of Government writing including articles, reports, letters, and memoranda.

Prerequisite: English Composition, or equivalent in writing experience.

United States Department of Agriculture Graduate School

GOVERNMENT REPORT AND LETTER WRITING (V2–012)

Non-credit, six sessions.

The essentials of good report and letter writing will be covered. The U.S. Government Correspondence Manual will be the guide for the letter writing portion. The letter writing section of the course will emphasize sincerity, simplicity, clarity, and conciseness. These principles will be carried over to the report writing, which will also emphasize the importance of assembling and analyzing information, planning the outline, writing the rough draft, and rewriting the report.

United States Department of Agriculture Graduate School

GOVERNMENT LETTER WRITING (4–330)

Two credits, one semester.

The course is designed for those who want to write clearer, more effective letters and memoranda so reader understands them easily. Principles and practice in planning, writing, and rewriting correspondence; writing accurate, human, clear, concise, courteous letters; emphasis on adjusting writing to intended reader; movie and visual aids are included in this course.

Prerequisite: High school ability in English.

United States Department of Agriculture Graduate School

EFFECTIVE WRITING SKILLS

Non-credit, fourteen weeks.

This course will explain fundamental principles of effective writing. Emphasis is placed on methods with extensive practice under supervision.

Young Women's Christian Association

EFFECTIVE WRITING (V2–010)

Non-credit, six weeks.

This seminar is designed to help the participant learn to write for specific audiences. Participants will learn by doing as they present their own work for criticism and evaluation by the instructor and group. Exercises are used to develop clarity and conciseness.

Special Programs
United States Department of Agriculture
Graduate School

TECHNICAL WRITING (ENGL 154)

Three credits, one semester.

The preparation of various types of technical communications included in this course as: technical memoranda; progress, recommendation, periodic, laboratory, library, and operations research reports; and proposal writing. Special attention is also given to descriptive, process, instructional and analytical problems.

Prerequisite: ENGL 101.

Prince George's Community College

TECHNICAL WRITING (ENGL 127)

Three credits, one quarter.

This course is designed to develop writing proficiency in technical fields. Emphasis is on collecting, organizing, and presenting materials applicable to various specialized areas.

Prerequisite: ENGL 102 or departmental approval.

Northern Virginia Community College

TECHNICAL WRITING (ENGL 120)

Three credits, one quarter.

The student will write clear and brief technical reports. He will collect and organize data, use the particular from suited to the specific purpose of the report, and observe stylistic and mechanical conventions. He will also create graphic presentations related to his career objective.

Prerequisite: ENGL 114.

Washington Technical Institute

REPORT WRITING (E 210)

Three credits, one trimester.

This course combines logic and rhetoric in the analysis and composition of lengthy business reports and data sheets. Particular emphasis is placed upon data interpretation and logical arrangements.

Prerequisite: E 102.

Southeastern University

X-RAY

RADIOLOGIC TECHNOLOGY (RT 101–102)

Four credits, one semester each.

These courses include an introduction to the field of radiologic technology; the History of X-ray practices, elementary radiation protection, X-ray physics, dark room chemistry and techniques, principles of radiographic exposure, radiographic positioning, contrast media, and nursing procedures pertinent to radiology and pediatric radiology.

RADIOGRAPHIC TECHNIQUES I, II (X-RAY 151, 152)

Four credits, one semester.

X-RAY 151 This course provides orientation, elementary radiation protection, professional ethics and conduct, medical terminology, darkroom technique, principles of radiographic exposure, radiographic positioning and film critique.

Five credits, one semester.

X-RAY 152 This course includes medical terminology, radiographic positioning, principles of radiographic exposure, contrast media, pediatric radiography, film critique, and assigned laboratory experience.

Prerequisite: X-RAY 151, PHYS 101. Laboratory fee: $10.

RADIOGRAPHIC TECHNIQUES III, IV (X-RAY 251, 252)

Nine credits, one semester each.

X-RAY 251 This is a continuation of X-RAY 151 and 152. It covers radiographic positioning, principles of radiographic exposure (sec. C), radiation protection, special radiographic procedures, topographic anatomy, nursing procedures pertinent to radiology, film critique, and assigned laboratory experience.

Prerequisites: X-RAY 152, BIOL 107. Laboratory fee: $10.

X-RAY 252 This advanced course covers radiation therapy, intraoral radiography, radioisotopes, medical-surgical diseases, equipment maintenance, departmental administration film critique, and assigned laboratory experience.

Prerequisite: X-RAY 251. Laboratory fee: $10.

Prince George's Community College

RADIOGRAPHY I, II, III (HTRT 101, 102 103)

Four credits, one quarter.

HTRT 101 The student will learn the chemistry and methods of radiographic film processing and elementary principles of radiographic exposure. He will also demonstrate knowledge and skill involving radiographic techniques for various examinations of the extremities.

Concurrent with BIOL 144, HTRT 111.

Four credits, one quarter.

HTRT 102 The student will demonstrate proficiency in the theory and practice of radiologic examinations of the spinal column, pelvis and bony thorax. He will show understanding of further principles of radiographic exposure, the nature and use of contrast and opaque media.

Prerequisite: HTRT 101, BIOL 145. Concurrent with HTRT 112.

Three credits, one quarter.

HTRT 103 The student will acquire knowledge of, and perform radiographic examinations involving the cardiorespiratory, gastro-intestinal, biliary and genitourinary systems with and without the use of contrast and opaque media.

Prerequisite: HTRT 102. Concurrent with HTRT 113.

Washington Technical Institute

CLINICAL RADIOGRAPHY I, II, III (HTRT 111, 112, 113)

Ten credits, one quarter each course.

The student will practice radiographic positioning and exposure in the Radiology Department of a cooperating hospital. He will demonstrate his technical ability and knowledge of radiographic film quality at film critique sessions. Concurrent with HTRT 101, 102, and 103, respectively.

Washington Technical Institute

RADIOLOGICAL SCIENCE I (HTRT 121)

One credit, one quarter each.

HTRT 121 The student will be introduced to the history of medicine, Radiology and Radiologic Technology. He will become familiar with the major terminology used in Radiology and will demonstrate knowledge of radiation protection and patient care procedures used by Radiologic Technologists.

HTRT 122 The student will grasp the significance of the professional, personal and legal responsibilities of a Radiologic Technologist and further details of the theory and mechanisms of radiation protection.

Prerequisite: HTRT 121.

HTRT 123 The student will understand the biological effects of ionizing radiation together with general and specialized techniques used in protection of patients and personnel from these effects.

Prerequisite: HTRT 122.

Washington Technical Institute

RADIOGRAPHY IV, V (HTRT 201, 202)

Two credits, one quarter.

HTRT 201 The student will demonstrate understanding of X-Ray equipment calibration, advanced concepts of radiographic exposure, preparation and use of exposure charts.

Prerequisite: HTRT 102, Concurrent with HTRT 210.

Three credits, one quarter.

HTRT 202 The student will demonstrate knowledge and skill in craniography, especially in examinations of the skull per se, facial bones, nasal bones, orbits, mandible, temporo-mandibular joints, the temporal bone and paranasal sinuses.

Prerequisite: HTRT 103. Concurrent with HTRT 211.

IV. General Educational Development

G.E.D.

The primary purpose of this catalog is to aid and guide training and personnel officers in their attempts to help government employees to advance. Most government employees are high school graduates and the concentration of the catalog has been on courses relevant to these persons. There is however, in the mainstream of the government workforce, a sizeable segment of employees who have not yet completed the necessary requirements for obtaining a high school diploma. The information contained in this section will provide some idea of the requirements and locations where high school completion can be undertaken.

There are usually two basic programs for this purpose: Attending evening high school for credits leading to a high school diploma and the General Education Development (GED) Test. Both of these programs are offered in almost all of the local public school systems. Further information on these programs as they are currently available in the Washington metropolitan area is contained in the following pages. In order to obtain some idea of the nature of the courses and the number of units required for a high school diploma two sample plans have been included in the Appendix.

ALEXANDRIA CITY PUBLIC SCHOOLS

General Information:

High school credit is offered (for many courses) to persons finding it impossible to attend day school, or to older persons wishing to complete high school work.

A student may choose to receive his/her diploma from the Alexandria Evening School or from the high school formerly attended. The Evening Schools counselor will assist with details as soon as this decision is made.

High School credit requires regular attendance, maintenance of passing grades, and successful completion of final examination.

The Adult Education Program includes a High School Division, a Vocational Office Education Program, and Adult Basic Education Program and an Adult Accelerated Learning Education Center (AALEC). All of these programs are held in the evening except the AALEC Center which is open from 9 a.m. to 9 p.m. (Fridays til 5 p.m.). Courses for all programs are held in various high schools under the jurisdiction of the Alexandria City Public Schools. For further details and contact information see the Directory of Schools.

Requirements for High School Diploma:

In the State of Virginia, two unit plans exist for earning the high school diploma. For those who began high school in the eighth grade, 20 or more units are required. For those who began high school after the eighth grade, 16 units are usually required.

Open To: See Directory of Schools

Tuition: See Directory of Schools

For Further Information:

Contact: Mr. Gene Noel
Coordinator, Alexandria Public Schools
Department of Adult Education
1005 M. Vernon Ave.
Alexandria, Virginia 22310
Phone: (703) 391-6207

ARLINGTON COUNTY PUBLIC SCHOOLS

General Information

The Arlington Adult Education Program offers courses to adults 17 years of age and over in the following areas:

ADULT BASIC EDUCATION

This program is free to anyone 17 years of age or older with less than eighth grade achievement in almost any area. Basic Education provides self-pacing individualized instruction in:

Reading
Writing
Math
Social Studies
Preparation for regular High School courses
Consumer Education
Sewing and General Homemaking
Filing and Office Procedures
Preparation for Civil Service Examination
English as a Second Language
Science

Classes listed above are evening classes and are in session at the following schools or locations:

Marshall School	4751 N. 25th St.
Drew Elementary School	3500 S. 24th St.
Jefferson Annex	1415 S. Queen St.
Langston Elementary	4854 Lee Highway
Pentagon	

High School Diploma Credit Program

Adults may earn credits toward a fully accredited high school diploma by attending day or evening classes. Anyone wishing to take one of these credit courses for the purpose of enrichment may do so by paying the tuition indicated under the course description.

The program is open to any adult seventeen years of age or over.

Credits required for graduation include: 4 credits in English, 3 credits in Social Studies, 1 credit in Mathematics, 1 credit in Science and 7 elective credits. Many individuals who have already graduated from high school enroll in these courses in order to strengthen their academic record, to further a vocational goal or simply to gain a better understanding of a particular subject.

General Education Development Refresher Program

This program is designed to prepare students for the GED Test which is administered monthly. A certificate is awarded upon successful completion of test. Course will stress five areas—English, Social Studies, Science, Math and English Interpretation.* All applicants must be at least 20 years of age and a resident of Virginia for at least 6 months. Enrollees may register for part or full term course.

Tuition: $32 for Full Semester; $16 for Half Semester.

*Students who decide to continue for a regular high school diploma will be granted one credit for the course as an elective.

AALEC

The Adult Accelerated Learning Center (AALEC) enables students to improve their reading and mathematics.

This new program allows flexibility in scheduling and study areas. Two methods of instruction are used—classroom and lab. Classes are small with much individualized instruction. The center is open 12 hours daily. Requirements are that a student be 16 years old or over and that he attend a minimum of three hours per week.

Students set their own hours and rate of study. In addition, a wide range of courses is offered in mathematics, English and the social sciences.

Students enroll in AALEC for many reasons—primarily for job advancement and to prepare for higher educational opportunities. Since many employees require entrance tests the school provides the educational background a student needs to qualify. *Location: Adult Education Center.*

Registration Information: Students register in this program at the time scheduled for classes. This is a continuing program open 12 months a year. Call the Arlington Adult Education Office, 527–1036, Extension 6, for additional information.

There are other programs in Adult Education available to residents as well as non-residents. Students should consult the most recent catalog, available upon request, or call the Arlington Adult Education Office. Further information can also be obtained from the Directory of Schools.

Hours for the above programs will vary as well as locations. Courses may be conducted on a semester or trimester basis.

Adult Education Centers

Arlington Community Action Program
2411 South Kenmore Street

Arlington Education Center
1426 North Quincy Street

Drew Elementary School
3500 24th Street North

Fort Barnard
2101 South Pollard Street

Gunston Junior High School
2700 South Lang Street

Kenmore Junior High School
200 South Carlin Springs Rd.

Langston School
4854 Lee Highway

Marshall Annex
4500 Old Dominion Drive

Marshall School
4751 25th Street North

Reed Elementary School
1644 North McKinley Street

Stratford Junior High School
4100 North Vacation Lane

Swanson Junior High School
5800 North Washington Blvd.

Thomas Jefferson Annex
1415 South Queen Street

Thomas Jefferson Junior High School
800 S. Walter Read Dr.

Wakefield High School
4901 South Chesterfield R.

Washington - Lee High School
1300 North Quincy Street

Williamsburg Junior High
3600 North Harrison Street

Wilson Elementary School
1601 Wilson Blvd.

Yorktown High School
5201 28th Street North

Open To:

Courses and programs are open to residents and non-residents except where noted.

Tuition:

(Diploma Students) Arlington residents, 19 years of age and under, working toward a high school diploma pay no tuition. Residents 20 years of age and over working toward a high school diploma pay $16. per course per semester. All non-residents pay $24. per course per semester.

Full credit courses offered in one semester or trimester $32 & $48. Late fee—$2.

(All Others) Students not working toward a high school diploma pay the tuition listed under the course description.

For Further Information:

Adult Education Program Office
4751 25th Street North
Arlington, Virginia 22207
Phone: (Area Code 703) 527–1036

CATHOLIC ARCHDIOCESE OF WASHINGTON

General Information

The Catholic Archdiocese of Washington provides for High School Equivalency preparation and also courses in Adult Basic Education.

High School Equivalency

The Office of Adult Education for the Archdiocese of Washington provides courses in high school equivalency preparatory to the test given periodically in the District of Columbia.

Classes average two nights a week from 7:10 to 9:15 p.m. Fall semester is 12 weeks, Spring semester is 15 weeks and the Summer semester is 6 weeks.

Adult Basic Education

The Office of Adult Education also provides courses in Basic English and Mathematics, Typing and Shorthand. Classes are held in the evening two nights a week from 7:10 to 9:15 p.m.

Adult Education Centers

Courses are offered at five locations in the District of Columbia. Addresses for these centers are located in the Directory of

Schools. Centers may not provide the same variety or combination of courses from one semester to the next. Therefore, interested readers should personally contact the Office of Adult Education. The address and telephone number are listed below.

Open To:

Residents of the District of Columbia.

Tuition:

Tuition is free to residents of the District of Columbia.

For Additional Information Call:

Monsignor Ralph Kuehner
Office of Adult Education
1419 V Street, N.W.
Washington, D.C. 20009
Phone: (202) 234–2197

PUBLIC SCHOOLS OF THE DISTRICT OF COLUMBIA

General Information

The District of Columbia Public Schools provides a program for adults to complete high school credits for a high school diploma and a program in High School Equivalency Preparation.

Adult High School Program

The High School Program is designed for the adult who wishes to qualify for the high school diploma in a short period of time. Students entering this program may enroll for five classes and complete the requirements for graduation at a rate equal to that of a regular day school. The school operates on a semester basis. Classes meet for 45 minutes five days each week. All classes except typewriting yield one credit (½ Carnegie Unit) for each semester work. Credits earned at other accredited high schools are recognized.

To qualify for a high school diploma, a student must complete 32 semester credits or 16 units, distributed as follows:

Subject	*Credits*	*Units*
Government	1	½
Am History 1 & 2	2	1
English 1 to 8	8	4
Mathematics	2	1
Science	2	1
Electives	17	8½
Total	32	16

This program enables a person to begin taking classes at 4:30 p.m., 45 minutes for each subject, until 10:30 p.m. For further details see the Director of Schools or call 629–6917 (Area Code 202).

High School Equivalency Preparation

Courses designed to prepare students for the High School Equivalency Test (GED) are given continuously, day and evening. Further details may be obtained by calling 387–0590 (Area Code 202).

Both programs are conducted at the Armstrong Adult Education Center, First and O St., N.W., Washington, D.C. (See Directory of Schools for further information.)

Open To:

All adult residents of Washington, D.C.

Tuition:

Free.

For Further Information Contact:

Mr. Elliot W. Lucas
Armstrong Adult Education Center
First and O Sts., NW.
Washington, D.C.
Phone: (202) 629–6917

FAIRFAX COUNTY PUBLIC SCHOOLS

General Information:

Fairfax County Public Schools has the following programs for persons without a high school diploma:

Basic Education—Courses in basic education are for persons 17 years of age or older and who have completed less than the 8th grade in formal education. For further details on this program contact any one of the Adult Centers listed below.

Adult High School—Persons without a high school diploma are encouraged to talk with the Principal of the nearest Adult High School Center to have their high school transcript evaluated for class scheduling and graduation purposes. Credits required for high school completion may be earned by attending day or evening classes.

Registration—All students must register in person with the

Evening Principal of the nearest Adult High School Center. A transcript of all previous high school credits earned is required. On the basis of the transcript, students will be advised of the number of courses needed. Schedules will be arranged to meet the needs of the students.

Courses in the evening meet from 7–10 p.m. at the Adult Centers. Courses vary from semester to semester in location and students should consult the most current catalog for precise information. These are available on request. Saturday Classes meet from 9:00 a.m.—12:00 Noon.

General Education Development Review—For those preparing for the General Educational Development test. Students may register for any section of the course. Text—$4.

Ed. 101 English
    Six Weeks—7:30–9:30 p.m.—Fee $12

Ed. 102 Social Studies & Science
    Three Weeks—7:30–9:30 p.m.—Fee $8

Ed. 102 Mathematics
    Six Weeks—7:30–9:30 p.m.—Fee $12

General Education Development Test

Fee $5.

The General Education Development Certificate, awarded upon successful completion of the G.E.D. Test, is recognized by most employers and by many colleges as being the equivalent of a high school diploma. Applicants for the test must be 20 years old, and have been a resident of Virginia for six months prior to the test date.

The G.E.D. Test consists of five parts—English Composition, social studies, natural sciences, literature, and mathematics. Emphasis is placed on the ability to evaluate critically and to think clearly in terms of concepts and ideas rather than on detailed content.

Registration at the Department of Adult Services, 10201 Main Street, Fairfax, or at the nearest Adult Education Center prior to the scheduled date of test.

The test requires two days for completion. It will be given from 8:30 a.m.—2:30 p.m. according to the following schedule. Consult the current catalog for dates and location.

Registration may be in person or by mail at the nearest Adult Center for any of the above three programs.

Adult Centers

Annandale High School, Phone 256–8448, Thomas D. Todd, Evening Principal, Medford Drive, Annandale 22030.

Edison High School, Phone 971–1321, Maurice Altom, Evening Principal. 5801 Franconia Road, Alexandria 22310.

Marshall High School, Phone 893–2447, Fred F. Adams, Evening Principal, 7731 Leesburg Pile, Falls Church 22043.

Woodson High School, Phone 591–7998, Walter J. Dowling, Evening Principal, 9525 Main Street, Fairfax 22030.

Open To:

Programs are open to residents and non-residents except where noted.

Tuition

Students should consult the most current catalog since cost varies for courses and programs. Those listed above are current at this time. Adult High School is free to residents of Fairfax County.

For Further Information

See Directory of Schools for more details and contact information.

MONTGOMERY COUNTY PUBLIC SCHOOLS

General Information:

The Montgomery County Public Schools Department of Adult Education provides a variety of programs—

Preparing for High School through Adult Basic Education courses.

Adult Education High School is a class designed for those who wish to review beginning high school level English and Mathematics prior to enrolling in the High School Equivalence Review class. Courses are conducted at various adult education centers in the county. For more details see the Directory of Schools.

Completing the High School Equivalence Program.

High School Equivalence Review—the Department of Adult Education, Montgomery County Public Schools, acts as an agent for the Maryland State Department of Education in administering the examination for High School Equivalence. Information on the Maryland Certificate of High School Equivalence can be secured from the Department of Adult Education. Applicants must be at least 17 years of age and have lived in the State of Maryland for one year. No previous attendance in high school is required. Courses are conducted at various adult education centers in the county. For more details see The Directory of Schools.

Completing requirements for the High School Diploma.

The Extended Hours Program allows citizens to attend classes in the evening for the purpose of obtaining a high school diploma. The curriculum is the same as the day school and is programmed for students to finish requirements in one school year (two semesters). Courses are held four nights a week, Mon.-thru-Thurs. One class attends from 6:45 p.m.—8:05 p.m. and another starts immediately after at 8:1[illegible] p.m. and finishes at 9:55 p.m. At present courses are conducted at only two high schools:

Wheaton High School
12601 Drive
Silver Spring, Maryland 20906

Gaithersburg High School
Summit Avenue
Gaithersburg, Maryland

Adult Basic Education for the Development of Skills for Progress in Occupations as well as Business and Personal Relationships.

Adult Basic Education provides courses in reading, writing, and basic arithmetic skills. In addition to these classes, others can be developed when a group of ten or more can be organized.

Open To:

Citizens of Montgomery County.

Tuition:

There is no cost for the above Adult Education Programs. Funds are provided under the Adult Education Act, 1966. Amended.

For Further Information Contact:

Montgomery County Public Schools
850 North Washington Street
Rockville, Maryland 20850
Phone: 279-3336

PRINCE GEORGE'S COUNTY PUBLIC SCHOOLS

High School Diploma

The Evening High School provides a program whereby persons sixteen years or older who are not enrolled in a regular day school program may complete the requirements for a Maryland high school diploma or prepare for entrance into institutions of higher learning.

Number of Units	*Per Semester*
English	4
Social Studies (One unit must be in United States History)	3
Science	2
Mathematics	2
Physical Education	1
Electives	6
Total	18

Schedule of Classes

Classes meet for one hour and forty-five minutes twice a week. A total of four classes may be taken each year. Classes are in session:

6:15 p.m. to 8:00 p.m.
8:15 p.m. to 10:00 p.m.

Centers for Evening High School

Bladensburg Center
56th Avenue & Tilden Road
Bladensburg, Maryland 20710
Telephone: 277–8300

Crossland Center
6901 Temple Hills Road, S.E.
Washington, D.C. 20031
Telephone: 449–7550

Fee and Expenses

The enrollment fee is $10.00 per course per year, payable at registration. The fee for non-resident is $40.00 per course per year.

High School Equivalency

Preparation for the High School Equivalency Test is conducted at several Adult Education Centers in the County. Courses are held two nights a week from 7:00 p.m.—9:00 p.m. and tuition is free for residents of Prince George's County. For further information call the telephone number listed below or see the Directory of Schools.

Basic Education, including General Education Development

Basic Education is a tuition-free program providing individualized instruction, grades 1–8, covering reading, writing, arithmetic, social studies, consumer education, etc. Students who complete the program may enroll in the Adult Evening High School, the General Education Development (GED) program or the Adult Education program. For further information call the telephone number listed below or see the Directory of Schools.

For Additional Information Call

Board of Education
Upper Marlboro, Maryland
Telephone: 627–4800, extension 378

V. Certificate and Degree Programs (G.E.D.)

1- AND 2-YEAR CURRICULUM

This section is included as a reference and a guide for Government personnel.

The purpose and intent behind the construction of this catalog has been described in the Introduction. Hopefully, Government employees will find the information beneficial both in their Government employment as well as in their own self-development.

Many Government employees can and will benefit from taking courses programmed for them by their training officers and related to their present jobs in the Government. Much of this education can be subsidized by the Government, provided that proper guidance is sought and followed.

Beyond this point, however, there will be some Government personnel who will want to go further in their self-development. It is a natural and encouraged development. It is, however, a personal choice, especially when it may no longer relate to a person's immediate position or goal. Any financial help will depend on the individual. There are several avenues which may be explored. These include:

1) consulting with the local school system;
2) talking with your assigned personnel officer; and
3) in both instances, asking them about grants, fellowships and internships.

This section of the Adult Continuing Educational Opportunities Catalog has been compiled to encourage Government personnel toward further self-development. On the following pages are listed two-year programs which are available in several local school systems. Most of these programs provide certificates after one year of study and Associate of Arts (or Science) after two years of study. The programs are usually scheduled for night classes and in most cases the costs are moderate.

Many of the programs require courses that some Government personnel will complete as part of a job requirement, such as the many courses listed throughout the catalog. Once an individual has completed one or two of these courses as part of their job requirement, he or she may wish to continue on their own and seek a certificate, or a degree.

The ease with which many such courses can be transferred to certificate or degree programs is shown in the samples on pages 366 and 367.

The institutions in the Washington, D.C. metropolitan area providing certificate and/or degree programs are listed on the following pages.

CENTER FOR CONTINUING EDUCATION
SCHOOL OF GENERAL STUDIES
UNIVERSITY OF VIRGINIA

The following certificates are currently offered upon completion of thirty or sixty semester-hours of credit in required and elective courses:

- Certificates in General Studies (Liberal Arts)
- Certificates in Business and Commerce
- Certificates in Accounting
- Certificates in Administrative Management

All courses in the above sequence are transferable toward a Bachelor's degree for those students who later qualify for admission into a degree program at the University of Virginia (Charlottesville, Virginia) or George Mason College (Fairfax, Virginia), a branch of the University.

FEDERAL CITY COLLEGE

- Applied Science
  - Computer Science
  - Food Technology
  - Engineering (includes Mechanical, Civil and Electrical)
  - Physics
  - Mathematics
- Business
  - Accounting
  - Business Economics and Finance
  - Business Education and Office Administration
  - Computer Science
  - Management
  - Marketing and Transportation
- Communication Sciences
- Community Planning and Development
- Media Technology
- Natural Science

Biology
Chemistry and Premedicine
Nursing
Social Science
Economics
Urban Studies

GEORGE MASON COLLEGE
UNIVERSITY OF VIRGINIA

Engineering

MONTGOMERY COLLEGE

Architecture
Busines Administration
Business Management
Cartography
Chemical Technology
Civil Engineering
Computer Science
Criminal Justice
Dental Assisting
Dental Laboratory Technology
Electronic Data Processing
Electronic Technology
Engineering
Fire Science
Geography, Cartography & Community Planning
Mechanical Engineering
Medical Laboratory Technician
Medical Technology
Nursing
Police Science
Pre-Dentistry
-Law
-Medicine
-Optometry
-Pharmacy
Printing Technology
Radiation Science and Technology
Radiologic (X-Ray) Technology
Recreation Leadership
Secretarial Science
Visual Communications Technology

NORTHERN VIRGINIA COMMUNITY COLLEGE

Architectural Technology
Broadcast Engineering Technology
Business Accounting
Business Management
Civil Engineering Technology
Data Processing Technology*†
Dental Assisting*
Dental Laboratory Technology†
Electronics Technology
Engineering Drafting*
Fire Science*†
Mechanical Technology
Medical Records Technology†
Nursing
Police Science*†
Pre-Engineering
Secretarial Science

*Certificate † Diploma

PRINCE GEORGE'S COMMUNITY COLLEGE

Accounting
Business Administration
Busines Management
Civil Technology
Computer Technology
Dental Assisting

- Drafting Technology
- Electrical Technology
- Electronics Technology
- Engineering
- Executive Secretarial
- Fire Science Technology
- General Secretarial
- Health Education
- Industrial Arts Education
- Industrial Technology
- Law Enforcement Technology
- Mechanical Technology
- Medical Laboratory Assistant Technology
- Nursing
- Recreation Leadership
- Secretarial Education
- Secretarial Science
- X-Ray Technology

UNITED STATES DEPARTMENT OF AGRICULTURE

A Certified Statement of Accomplishment is given by the U. S. Department of Agriculture for satisfactory study in the following curriculums:

- Accounting
- Administrative Procedures
- Editorial Practices
- Financial Management
- General Engineering*
- Graphic Arts
- Library Technician
- Natural History Field Studies
- Oceanography
- Public Administration
- Statistics
- Surveying and Mapping
- Systems Design

*more than 60 hours required

SOUTHEASTERN UNIVERSITY

- Busines Administration (Comprehensive or Accounting)
- Public Accounting

WASHINGTON TECHNICAL INSTITUTE

- Aerospace Technology
  - Aviation Maintenance Technology
- Busines Technology
  - Accounting
  - Business Management*
  - Computer Science (two-year program)
  - Computer Operations (one-year program)
  - Secretarial Science*
- Engineering Technology
  - Advertising Design
  - Architectural Engineering Technology*
  - Civil Engineering Graphics*
  - Electrical Engineering Technology
    - Electromechanical Technology
    - Electronics Technology
    - Instrumentation Technology
    - Power Distribution Technology
    - Radio and T.V. Repair (one-year program)
    - Highway Construction
    - Materials Testing

*One- and two-year programs available

        - Printing and Publishing*
        - Surveying and Mapping*
        - Urban Planning
- Environmental Science Technology
    - Marine Science Technology
- Health Technology
    - Nursing
    - Radiologic Technology
    - Respiratory Therapy
- Public Administration Technology
    - Education Technology
    - Police Science
    - Public Administration
    - Recreational Leadership
    - Social Welfare
- Science Technology
    - Biotechnology
    - Chemical Technology

*One- and two-year programs available

VI. Directory of Schools as Listed in this Catalog With General Information on Each

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ALEXANDRIA CITY PUBLIC SCHOOLS

General Information:

In the area of adult education there are three programs for enabling individuals to continue or enhance their educational backgrounds. These include Adult Basic Education, Secondary Education and Adult Distributive Education. The major portion of the Adult Continuing Educational Opportunities Catalog is devoted to the first and third areas with Secondary Education covered in a separate section General Educational Development.

The Adult Basic Education program is designed to help all adults 16 years of age or older with less than an 8th grade education to improve their skills in reading, writing, and simple arithmetic. The Secondary Education program has been organized to enable citizens of the area to complete credit for a high school diploma. Adult Distributive Education works with the areas of wholesaling service and retailing, serving the individual as well as the company.

Who May Attend:

Anyone no longer in regular school may enroll. Students who are presently enrolled in day school may be eligible if they are 18 years old, or if they are in their senior year and by attending evening school, will be graduated that academic year.

How To Register:

Call the number listed below for dates and location. Ten persons must register for a given class before its second class meeting to keep it open.

Tuition:

Two courses—$21.00 per session, one course—$18.00 per session the full course fee must be paid at time of registration.

For Further Information Contact:

Mr. Gene Noel
Coordinator, Alexandria Public Schools
Department of Adult Education
1005 M. Vernon Ave.
Alexandria, Virginia 22310
Phone: Area Code 703, 391-6207

ARLINGTON PUBLIC SCHOOLS

Adult Education Program

General Information:

The Arlington Adult Education Program offers courses for adults in several major areas:

- ° The High School Diploma Program—This program provides courses for those seeking a high school diploma. There is no charge for Arlingtonians under 19. Tuition is $16 per course for Arlingtonians over.
- ° The High School Equivalency Program—This program provides courses which will prepare the individual for the High School Equivalency test.
- ° The Adult Basic Education Program—This program is free to anyone 16 years of age or older with less than eighth grade achievement.
- ° The General Adult Education Program—This is a general program of courses designed to enrich individual education, either for personal or job-related needs.

Who May Attend:

Enrollees must be seventeen years of age or over (except in Adult Basic Ed. program).

How To Register:

Registration may be made by mail or at the Adult Education Program office. Tuition must accompany all registrations.

Tuition:

All students not working toward a high school diploma pay the tuition listed next to each course in the school bulletin. Tuition is paid by the term, or semester and averages $32 for residents, $48 for non-residents.

For Further Information Contact:

Mr. William P. Young
Director, Adult Education Program
4751 North 25th Street
Arlington, Virginia 22207
Phone: Area Code 703, 527-1036

Bowie State College

General Information:

Bowie State College is located in Prince George's County, 18 miles from Washington, D.C. The Evening College provides men and women with the opportunity to pursue on a part-time basis either a liberal education in the arts and sciences or a professional education. Courses are conducted in the following Evening College Centers:

Bowie State College
Bowie Road
Bowie, Maryland 20715

Bowie Senior High School
15200 Annapolis Road
Bowie, Maryland 20715

Laurel Senior High School
Rt. 2, Box 1
Cherry Lane
Laurel, Maryland 20810

Who May Attend:

Applicants are expected to be high school graduates but exception may be made for mature men and women. A high school transcript and formal application are not required unless the applicant is planning to pursue a degree.

How To Register:

Registration is held prior to each semester. Students are expected to register on the campus at that time. To obtain exact dates see "For Further Information Contact" below.

Tuition:

Tuition is $20.00 per credit, payable at registration.

For Further Information Contact:

Dr. U. S. Young
Bowie State College
Evening College
Bowie, Maryland 20715
Phone: Area Code 301, 262–3350 (ext. 48)

CATHOLIC ARCHDIOCESE OF WASHINGTON

General Information:

Though the goals of the Centers are educational, strictly speaking, personal contact is fundamental to the approach of the Centers. An open-door policy—the Centers try to do all possible to meet the educational needs of all who present themselves at any time and there will be an effort to assist the students in the area of employment. There are several Adult Education Centers that are open to the men and women of this area:

Sacred Heart Center
1621 Park Road, N.W.
Mackin Center
1415 V Street, N.W.
St. Cecilia's Center
601 East Capitol Street
Notre Dame Center
North Capitol and K Streets
St. Matthew's Center
1717 Rhode Island Ave, N.W.

Who May Attend:

The Courses are open to all men and women of the area.

How To Register:

Obtain schedules from contact information below and attend on the registration night as indicated in the schedules.

Tuition:

There is no tuition fee for D. C. area residents.

For Further Information Contact:

Msgr. Ralph Kuehner, Director
Catholic Archdiocese of Washington
1419 V Street, N.W.
Washington, D. C. 20009
Phone: Area Code 202, 234–2197

THE CATHOLIC UNIVERSITY OF AMERICA

General Information:

If you have completed your formal education (university, college, of high school), you are invited to attend these non-credit courses. No degrees or credits are given or required. No exams or homework are demanded. Each course meets once a week for eights weeks. Classes are held in the early evening, during the day, and on week-ends. Take as many courses as you wish.

Who May Attend:

Open to all university, college and high school graduates.

How to Register:

Registration is handled exclusively by mail. There is also parking in these three areas:

Campus at 4th and Michigan Ave., N.E.

Parking available at the McMahon and Pangborn lots. $2 for

8 weeks. Application for parking sticker will be sent with your course ticket.

Campus at 4001 Harewood Rd., N.E.

Parking available on Harewood Road itself. No fee for street parking.

St. Patrick's Hall, 924 G St., N.W.

Woodward & Lothrop parking lot is nearby. Fee is required. Street parking without a fee is available after 6:30 p.m.

Tuition:

Tuition varies and is listed with each course description in the school announcement.

For Further Information Contact:

Adult Education
Box 1305
Catholic University
Washington, D.C. 20017
Phone: Area Code 202, 529–6000 (ext. 715)

DISTRICT OF COLUMBIA PUBLIC SCHOOLS

Department of Adult Education

General Information:

The Vocational Program: Vocational programs are available to adults who have completed or left high school and are available for full time study in preparation for entering the labor market. Special classes are offered for those who are already employed and can be upgraded as a result of training.

Priority for entering vocational classes is given to veterans and those students who can attend six hours a day, five days a week. Second priority is given to students who may attend four hours a day, five days a week. Third priority is given to students who may attend three hours a day, five days a week. No student is accepted in the vocational program who cannot attend class at least fifteen hours per week.

The length of training will vary according to the subject matter to be covered and the needs of those in each class. Certificates are awarded in vocational subjects upon the successful completion of the course.

The demand for enrollment in the vocational classes has been so great the applications exceed the available training spaces in every shop class. Waiting lists have been established and vacancies are filled from these lists.

For information on the Adult High School Program see the section in this catalog titled, "General Educational Development.

All courses listed in the catalog have been approved by the Veterans Administration. Veterans are eligible to draw educational benefits while attending classes.

Who May Attend:

The classes are open to all adult residents of metropolitan Washington, D. C. (City residents, not Maryland or Virginia residents.)

How To Register:

Registration information can be obtained by contacting the centers listed below.

Armstrong Adult Education Center
First and O Street, N.W.
Washington, D. C.
(day and evening classes)

Blair Adult Education Center
Eye Street, N.E.
Washington, D. C.
(day schol only)

The evening centers are:

Anacostia Adult Education Center
16th and R Street, S.E.
Washington, D. C.

Cardozo Adult Education Center
13th and Clifton Street, N.W.
Washington, D. C.

Bell Vocational Center
3145 Hiatt Place, N.W.
Washington, D. C.

Tuition:

There are no fees for Washington, D.C. residents over 21 or self-supporting. Cost varies for non-residents.

For Further Information Contact:

Armstrong Adult Education Center
    Phone: 629–6917
    Contact: Mr. Elliot W. Lucas
Blair Adult Education Center
    Phone: 629–6887
Anacostia Adult Education Center
    Phone: 629–4673
    Contact: Mrs. Ruby M. Shaksmider
Bell Vocational Center
    Phone: 629–2566
    Contact: Mr. John H. Williams
Cardozo Adult Education Center

Phone: 629–4614
Contact: Mr. Louis C. Taylor

FAIRFAX COUNTY PUBLIC SCHOOLS

General Information:

The Division of Adult Services of Fairfax County Public Schools offers day and evening courses of instruction for adults in areas of basic education and high school completion, general interests, home and family life, personal improvement, and occupational preparation and upgrading. Courses are conducted at the following Adult Centers:

Annandale High School
4700 Medford Drive
Phone: 256–8448

Edison High School
5801 Franconia Road
Phone: 971–1321

Marshall High School
7731 Leesburg Pike
Phone: 893–2447

Woodson High School
9525 Main Stret
Phone: 591–7998

Who May Attend:

Open to residents of Virginia.

How To Register:

Registration may be completed either by mail or in person at one of the Adult Centers.

Tuition:

Tuition varies from $5 to $45 and is listed with each course description in the school bulletin. Payment of tuition and textbooks must be made with registration. For all "Ed" courses make checks payable to the Adult Education Center where registering.

For Further Information Contact:

Mr. Kenneth Plum
Division of Adult Services
10201 Main Street
Fairfax, Virginia 22030
Phone: Area Code 703, 691–2414

FEDERAL CITY COLLEGE

General Information:

Federal City College is a Land Grant College in the District of

Columbia. Courses are conducted from 8 a.m. to 10 p.m. Semesters are arranged quarterly.

Who May Attend:

Open to residents and non-residents of the District or Columbia.

How To Register:

Registration information can be obtained from address or telephone number listed below.

Tuition:

Residents	*Number of Credit Hours*	*Non-Residents*
$10	1–5	$100
15	6–9	150
20	10–13	200
25	14*	240

*Add $4.50 for student activity fee

For Further Information Contact:

Mr. Casey Mann
Federal City College
425 2nd Street, N.W.
Washington, D. C. 20001
Phone: Area Code 202, 727–2522

MONTGOMERY COLLEGE

General Information:

The College operates on a semester basis, fall and spring, with two regular sessions of approximately 16 weeks each constituting its academic year. In addition the college offers an 8-week summer session.

Montgomery College has two campuses, one located in Takoma Park and the other in Rockville.

The Takoma Park Campus occupies the entire block surrounded by Takoma Avenue, New York Avenue, and Fenton Street. Since 1950 it has occupied this site, formerly the campus of the Bliss Electrical School.

The Rockville Campus is located off Route 355 on the western edge of Rockville, adjacent to the Montgomery County Educational Services Center.

Each campus maintains a day and an evening schedule. A detailed schedule of classes is published three times a year.

During the academic year the college offices are open daily Monday through Friday from 7:30 a.m. until 5:00 p.m. Certain campus offices remain open until 9:00 p.m.

Who May Attend:

A mature student who gives evidence of ability to profit from college work may be admitted as a special student to pursue college courses to fit his individual needs or interests. A special student is expected to present satisfactory secondary preparation, vocational experience, or general maturity, to assure satisfactory completion of the courses elected. A special student is not a candidate for a degree, but may so qualify by fulfilling the admission requirements for a regular student. A special student may not enroll in more than two courses per semester.

Complete approval of Montgomery College courses by the Veterans Administration makes possible the training of veterans under the public laws which give them educational benefits. A veterans' counselor at the college assists in any matter pertaining to the relationship of students with the United States Veterans Administration.

The college has arranged with the United States Navy to train personnel of the U.S. Naval Ordnance Laboratory and the National Naval Medical Center. Other branches of the Armed Forces also send students to the college for training.

How To Register:

Prospective students should consult the college for admission information. Once admitted, students (day and evening) register on regularly scheduled days at the appropriate campus.

Tuition:

Fees, tuition, and other charges are payable in full immediately upon completion of registration. Payment must be made at the cashier's office by cash, check, or money order. Checks and money orders must be made payable to Montgomery College, for the exact amount of tuition, fees, and other charges. Students will not be admitted to class until the prescribed charges have been paid.

For residents of Montgomery County	
Full-time load (twelve or more hours), each semester	$175.00
Part-time load, per semester hours	15.00
For residents of Maryland outside Montgomery County	
Full-time load (twelve or more hours) each semester	385.00
Part-time load, per semester hour	32.00

For non-residents of Maryland	
Full-time load (twelve or more hours), each semester	500.00
Part-time load, per semester hour	42.00
Fees:	
(Fees are not refundable)	
Application fee (one-time payment—not refundable)	
Full- and part-time students	10.00
Registration fee:	
All students, per semester	5.00

Review English, Mathematics, and Reading

Review English—Equivalent to five semester hours (no credit)

Review Mathematics—Equivalent to three semester hours (no credit)

Review Reading—Equivalent to five semester hours (no credit)

	English	*Mathematics*	*Reading*
For residents of Montgomery County	$ 75.00	$45.00	$75.00
For residents of Maryland outside Montgomery County	160.00	96.00	160.00
For non-residents of Maryland	210.00	126.00	210.00

Students who are enrolled full-time do not pay the special fees for the above review courses.

For Further Information Contact:

Takoma Park Campus
Takoma Avenue & Fenton Street
Takoma Park, Maryland 20012
Phone: 587–0415

Rockville Campus
51 Mannakee Street
Rockville, Maryland 20850
Phone: 762–7400

MONTGOMERY COUNTY PUBLIC SCHOOLS

General Information:

Evening classes will meet from 7:30 to 9:30 on the registration date and the same day thereafter for ten weeks.

Classes which meet twice a week will meet on the same two nights each week. Day classes will meet at the time indicated opposite the registration date listed in the school brochures.

In addition to the classes already organized and listed, others will be developing when a group of ten or more, who will be in regular attendance, can be organized. An individual or community organization interested in organizing similar classes is urged to contact the Department of Adult Education, Montgomery County Public Schools, 279–3336.

Evening Centers:

Bethesda-Chevy Chase High School
4301 East West Highway
Bethesda

Bethany House
199 Rollins Avenue
Rockville

Damascus High School
25921 Ridge Road
Damascus

Eastern Junior High School
300 University Boulevard, East
Silver Spring

Gaithersburg High School
Summit Avenue
Gaithersburg

Herbert Hoover Junior High School
Post Oak & Tuckerman Lane
Rockville

Kensington Junior High School
Kensington Parkway & Saul Road
Kensington

Montgomery Blair High School
Wayne Avenue & Dale Drive
Silver Spring

North Bethesda Junior High School
8935 Bradmoor Drive
Bethesda

Northwood High School
919 University Boulevard, West
Silver Spring

Paint Branch High School
14121 Old Columbia Pike
Silver Spring

Peary High School
13300 Artic Avenue
Rockville

Richard Montgomery High School
Richard Montgomery Drive
Rockville

Rockville Civic Center
Baltimore Road & Edmonston Drive
Rockville

Rockville High School
2100 Baltimore Road
Rockville

Sherwood High School
300 Olney Sandy Spring Road
Sandy Spring

Small Business Administration
8115 Fenton Street, 3rd floor
Silver Spring

Southlawn Middle
1000 First Street
Rockville

Springbrook High School
201 Valleybrook Drive
Silver Spring

Thomas S. Wootton High School
2100 West Ritchie Parkway
Rockville

Wheaton High School
Dalewood Drive & Randolph Road
Wheaton

White Oak Junior High School
New Hampshire Avenue & Jackson Road
Silver Spring

Walt Whitman High School
7100 Whittier Boulevard
Bethesda

Charles W. Woodward High School
11211 Old Georgetown Road
Rockville

Day Centers:

Argyle Community Building
1100 Forest Glen Road
Silver Spring

Ayrlawn Community Room (Elementary)
5650 Oakmont Avenue
Bethesda, Maryland

Bethesda-Chevy Chase Recreation Center
4700 Norwood Drive
Bethesda

Bethany House
199 Rollins Avenue
Rockville

Capital View-Homewod Recreation Center
Edgewod Road & Grant Avenue
Kensington

Glenmont-Connecticut Recreation Center
Randolph & Bluhill Roads
Wheaton

Grace Methodist Church
North Frederick Avenue & Walker Street
Gaithersburg

Hilandale Recreation Center
10615 New Hampshire Avenue, Ext.
Hillandale

Jessup Blair Park Comm. Building
Georgia Avenue & Blair Drive
Silver Spring

Longbranch Recreation Center
Piney Branch off University Boulevard
Silver Spring

Lynnbrook Recreation Center
Newdale & Lynnbrook Drives
Bethesda

Northwood United Presbyterian Church
1200 University Boulevard, West
Silver Spring

Ohr Kodesh (MCJCC)
8402 Freyman Drive
Chevy Chase

Paint Branch High School
14121 Old Columbia Road
Silver Spring

Poolesville High School
17501 Willard Road
Poolesville, Maryland

Randolph Hills Recreation Center
11805 Ashley Drive
Wheaton

Rockville Civic Center
Baltimore Road & Edmonston Drive
Rockville

Rockvile Methodist Church
112 West Montgomery Avenue
Rockville

Sligo Community Building
Dennis Ave. & Sligo Creek Parkway
Silver Spring

Small Business Administration
8115 Fenton Street, 3rd floor
Silver Spring

St. Andrews Methodist Church

Goldsboro & River Roads
Bethesda

St. John's Episcopal Church
6701 Wisconsin Avenue
Chevy Chase

Shaare Tefila Congregation
11120 Lockwood Drive
Silver Spring

Stoneybrook Recreation Center
Havard Road Off Viers Mill Road
Wheaton

Takoma Park Recreation Center
Grant Avenue Off Piney Branch
Takoma Park

Twinbrook Baptist Church
1001 Twinbrook Parkway
Rockville

Warner Memorial Presbyterian Church
10123 Connecticut Avenue
Kensington

Wheaton Recreation Center
Claridge Road off Viers Mill Road
Wheaton

Wheaton Woods Recreation Center
Faroe Place & Evanston Street
Wheaton

Woodside United Methodist Church
8900 Georgia Avenue
Silver Spring

Who May Attend:

Classes are open to all adults sixteen years of age or over who are not enrolled in a day school program.

How To Register:

Contact the instructor at one of the Adult Basic Education centers listed or the Department of Adult Education, Montgomery County Public Schools, 279–3336.

Tuition:

Fee is $10.00 for a 10-week course with class one night per week, unless otherwise indicated.
(The fee is paid to the instructor at the time of registration. Checks are to be made payable to Montgomery County Public Schools.)

For Further Information Contact:

Montgomery County Public Schools
850 North Washington Street
Rockville, Maryland 20850
Phone: 279–3336

NORTHERN VIRGINIA COMMUNITY COLLEGE

General Information:

The College is a two-year institution of higher education established under a state-wide system of Community Colleges in Virginia and serving the counties of Arlington, Fairfax, Loudoun, Prince William, and the cities of Alexandria, Fall Church and Fairfax.

Who May Attend:

Programs at Northern Virginia Community College are offered to enable the adults in the region to continue their learning. This work includes both degree credit and non-degree credit work offered during the day and evening hours. Applicants must have a high school education.

How To Register:

An application fee of $5.00 must accompany the application for admission to the College for each regular and special student. This fee is not applicable to tuition, nor refundable unless the requested program or course is not offered. Information on registration schedules can be obtained through the contact information below.

Tuition:

Full-time Student (12 or more credits):	
Virginia Resident	$ 60.00 per quarter
Out-of-State Resident	200.00 per quarter
Part-time Student (less than 12 hours):	
Virginia Resident	$ 5.00 per credit (or equivalent)
Out-of-State Resident	17.00 per credit (or equivalent)

For Further Information Contact:

Central Campus
8333 Little River Turnpike
Annandale, Virginia 22003
Phone: Area Code 703,
280–4000

Eastern Campus
3443 South Carlyn Spring Rd.
Bailey's Crossroads, Virginia
22041
Phone: Area Code 703,
280–4000

OPPORTUNITIES INDUSTRIALIZATION CENTER

General Information:

The Opportunities Industrialization Center is an independent Federally funded organization serving the adult members of Washington, D. C.

Who May Attend:

Anyone 18 years of age or over.

How To Register:

Information maybe obtained by writing to the address or calling the telephone number listed below.

Tuition:

None to participants; Federal funded.

For Further Information Contact:

Mr. Edward A. Hailes
Opportunities Industrialization Center
The Washington Institute for Employment Training, Inc.
1715–17 14th Street, N.W.
Washington, D. C. 20009
Phone: Area Code 202, 265–2626

PRINCE GEORGE'S COMMUNITY COLLEGE

General Information:

Prince George's Community College is a junior college located in Largo, Maryland. There are several types of programs offered at the college:

1. Academic two-year curriculums for transfer to four-year colleges and universities.
2. Technical, occupational, and semiprofessional training leading to employment in specialized fields.
3. Activities for adults who desire continuing education or personal enrichment.

Classes are conducted between 8:00 a.m. to 10:15 p.m. Monday, Wednesday, and Friday; between 8:00 a.m. and 9:45 p.m. on Tuesday and Thursday; and on Saturday between 9:00 a.m. and 12:20 p.m.

Who May Attend:

The College operates under an "open-door" policy to all high school graduates and other adults who qualify for specific programs. For a low tuition, students are admitted without regard to race, color, religion, or social status.

Special Student Classifications—Non Degree Seeking Students: Applicants not desiring or not eligible to work toward a degree may seek admission as a special student. Anyone who has attended Prince George's Community College as a degree-seeking student cannot apply for admission as a special student. Any applicant admitted as a special student is not eligible to enroll for more than 9 semester credit hours during any one semester. Additionally he may not attempt more than 18 semester credit hours as a special student.

How To Register:

An applicant desiring to be admitted as a special student must:

A. Secure from, complete, and return to the Office of Admissions and Records the Application for Admission as a Special Student.

B. Return with the application a non-refundable fee of five dollars. Checks and money orders should be made payable to Prince George's Community College. (Applicants who have previously submitted an application for admission are not required to pay an additional application fee.)

C. Applications for fall semester admission as a special student will be accepted until the last working day prior to the beginning of the registration period. The same applies to those desiring admission as a special student for the spring semester.

Tuition:

For residents of Prince George's County	
Full-time, per semester (12 or more semester hours)	$150.00
Part-time, per credit hour (not to exceed $150.00)	13.00
For residents of Maryland outside of Prince George's County	
Full-time, per semester (12 or more semester hours)	$330.00
Part-time, per credit hour (not to exceed $330.00)	28.00
For residents of Maryland	
Full-time, per semester (12 or more semester hours)	$600.00
Part-time, per credit hour (not to exceed $600.00)	50.00

For Further Information Contact:

Mr. Roy W. Christenson
Director of Admissions
Prince George's Community College
301 Largo Road
Largo, Maryland 20870
Phone: 336–6000

PRINCE GEORGE'S COUNTY PUBLIC SCHOOLS

General Information:

The Board of Education of Prince George's County sponsors a wide-ranging educational program for adults as well as for the children and youth of the County. Courses are offered in three separate areas in an effort to meet the diverse needs and desires of citizens who wish to advance academically or pursue individual interests or vocations through planned instruction. These areas are:

- — Adult Basic Education, which provides literacy training for non-readers.
- — General Education, which offers courses to adults in vocational training and leisure time activities.
- — Evening High School, which provides individuals with opportunities to take courses that will lead to a high school diploma and to meet requirements for admission to an institution of higher education.

Adult Education Centers:

Accokeek Elementary
Baden Elementary
Belair Junior High
Beltsville Presbyterian Church
Benjamin Stoddert Junior High
BLADENSBURG JUNIOR HIGH*
BLADENSBURG SENIOR HIGH*
BOWIE SENIOR HIGH*
Brandywine Elementary
Buck Lodge Junior High
Carole Highlands Elementary
Central Senior High
CROSSLAND SENIOR HIGH*
Fairmont Heights Elementary
Fairmont Heights Senior High
Forest Height Community Center
Fort Washington Methodist Church
Frederick Douglass Jr-Sr High
Frederick Sasser Jr-Sr High
Friendly Senior High
Glenarden Woods Elementary
High Point Senior High
Highland Park Elementary
Hyattsville Junior High
Lanham Elementary
Laurel Junior High
LAUREL SENIOR HIGH*
Marlboro Elementary
Mary Bethune Junior High
McCormick Elementary High
Nicholas Oreru Junior High
NORTHWESTERN SENIOR HIGH*
Orme Elementary
Oxon Hill Senior High
Parkdale Senior High
Robert Goddard Junior High
Rockledge Elementary

*Capital letters indicate centers with most courses and accessibility.

Seabrook Baptist Church
Spaulding Junior High
Springhill Lake Apartments
Springhill Lake Community Center
SUITLAND SENIOR HIGH*
Takoma Co-Op Hospitality Center
Takoma Langley Community Center

Courses are conducted in the evening from 6:15 until 10:00 p.m.

*Capital letters indicate centers with most courses and accessibility.

Who May Attend:

All adults of the county.

How To Register:

Registration may be made in person. Information about the appropriate times and places can be obtained by writing to the address below.

Tuition:

The enrollment fee is $10.00 per course for residents and $40.00 per course for non-residents.

For Further Information Contact:

Prince George's County Public School
Adult Education Centers
Upper Marlboro, Maryland 20870
Phone: Area Code 301, 627–4800 (P.G. County School System)
227–8300 (Bladensburg Center)
449–7550 (Crossland Center)

SOUTHEASTERN UNIVERSITY

General Information:

Southeastern University is a co-educational college of business and financial administration and uses the trimester system. The college offers courses leading to the customary bachelors degree of a professional or terminal occupation nature-in the Education Directory, Part 3: Higher Education, published by The Office of Education, Department of Health, Education and Welfare.

The Downtown Center of Southeastern University is in Washington, two blocks west of the White House. Facilities of the University are located in the Young Men's Christian Association buildings between 1732 and 1740 G Street, N.W. The General Office is in Room 300, 1736 G Street, N.W. Conveniently accessible to the University are many of the departments of the Government as well as leading commercial and financial businesses of the Nation's Capital.

The Alexandria Branch of the University is located at the Francis C. Hammond High School, Seminary Road and Shirley Highway, Alexandria, Virginia 22304.

The Curricula of the College are approved by the Veterans Administration for the enrollment of Veterans under Public Law 89–358 (The Veterans' Readjustment Benefits Act of 1966) and disabled Veterans under Public Law 87–815. Children of deceased or disabled Veterans may apply for admission under Public Law 634.

Application for educational training under these Laws should be made directly to the Veterans Administration after conferring with Southeastern University counselors.

Who May Attend:

The college grants admission to qualified students (high school graduates or equivalent) of all ages and national origins regardless or race, creed or color.

How To Register:

Registration is accomplished in person at the University General Office, Room 300, 1736 G Street, N.W., Washington, D. C., between the hours of 10:00 a.m. and 7:00 p.m. Interested persons should request an Application for Admission, Course Enrollment Form, and Schedule of Classes in advance of the opening date of the course.

Inquiries about admission to the University should be addressed to the Director of Admissions. The admissions office receives and processes all applications and credentials, and issues letters of admission to qualified applicants. Students may enter at the beginning of any trimester during the academic year.

Tuition:

Tuition per Credit Hour	$28.00
University Fee per Trimester (not refundable)	15.00
(University Fee is specifically waived for residents of the City of Alexandria who attend the Alexandria Branch)	
Curriculum Fee	5.00

A curriculum fee of $5.00 per trimester is assessed each student for the use of materials and teaching aids. These include the computer, laboratory equipment, audio-visual and other special materials. It is not refundable.

All tuition and fees are payable in advance or at the time of registration. Some students, however, find it convenient to use an extended payment plan, in which case they may arrange with the Business Manager at the time of registration to make monthly payments-including a service charge of $1.00 per course carried-according to the following schedule:

Total Hours	Tuition & Fees	Service Charge	Initial Payment	2nd Payment Due in	3rd Payment Due in
3 hrs.	$104.00	$1.00	$ 35.00	$ 35.00	$ 35.00
6 hrs.	$188.00	$2.00	$ 64.00	$ 63.00	$ 63.00
9 hrs.	$272.00	$3.00	$ 92.00	$ 92.00	$ 91.00
12 hrs.	$356.00	$4.00	$120.00	$120.00	$120.00
15 hrs.	$440.00	$5.00	$149.00	$148.00	$148.00
18 hrs.	$524.00	$6.00	$177.00	$177.00	$176.00

For Further Information Contact:

University General Office
Room 300
1736 G Street, N.W.
Washington, D.C. 20006
Phone: Area Code 202, NA8–2668

UNITED STATES DEPARTMENT OF AGRICULTURE

1. Graduate School

General Information:

The Graduate School does not offer degree programs. Consequently the requirements for entrance depend upon the level of the course for which the student is registering.

Undergraduate courses are open to graduates of a standard high school or to persons who have demonstrated that they have achieved an equivalent educational level. For admission to more advanced courses, college work in the same or related field is presumed. Specific prerequisites are stated for admission to many courses. A student is expected to have completed the first semester of a year course before he may register for the second semester. The Graduate School is also available to veterans.

Who May Attend:

All qualified employees of the Federal Government and other qualified persons are eligible to be admitted to resident and correspondence courses in the Graduate School.

How To Register:

Registration processing details can be obtained using the contact information below. Officers of the Graduate School are available throughout the registration periods and from 9:00 a.m. to 5:00 p.m. each weekday for counseling on educational plans in the Graduate School, or elsewhere.

Tuition:

The course fee is $22.00 for each semester hour credit and service fee is $1.00 for each course using the deferred payment plan. Due and payable in advance at registration.

For Further Information Contact:

United States Department of Agriculture
Graduate School
Independence Ave., Bet. 12th & 14th Streets, N.W.
Washington, D. C. 20250
Phone: Area Code 202, 388–6337 (Code 111, ext. 6337)

2. *The Individual Learning Center*

General Information:

Courses are programmed, and provide constant reinforcement of new skills, interim progress checks, post-test, and remedial work when necessary. In addition, an instructor is always available for tutoring and consultation.

Classes begin the first Tuesday of each month. Students will be accepted after that date on a space available basis. All classes are held in Room 1416 of the South Agriculture Building. Fees are listed with course descriptions and cover the complete program, including all books and materials. Agencies interested in enrolling five or more students should contact the Center for group rates.

Who May Attend:

All government employees who would like to upgrade themselves by learning a new skill, or by reestablishing competence in a subject. Many agencies nominate employees for courses; however, any individual is welcome to the Center whether he is a government employee or not.

How To Register:

Registration processing details can be obtained using the contact information below.

Tuition:

Fees are listed with course descriptions in the Center's brochures or the school's catalog.

For Further Information Contact:

Mrs. Nancy Krueger
The Individual Learning Center
Graduate School
U.S. Department of Agriculture
Washington, D.C. 20250
Phone: Area Code 202, 388–6694, or Code 111 ext. 6694

3. Special Programs Department

General Information:

Courses are held in the daytime and are primarily designed to meet the needs of government agencies. The Programs take on various forms—seminars, institutes, workshops, and traditional college-type courses. Some are all-day sessions ranging from one day to eighteen weeks, others meet an hour or two once or twice a week for several months.

Classes are held in the Federal Triangle area and in the vicinity of the Graduate School offices in the U.S. Department of Agriculture's South Building.

Who May Attend:

All courses are open to qualified employees of government agencies and to other qualified persons as facilities permit.

How To Register:

Non-government personnel may obtain registration details using the contact information below. For government employees nominations should be submitted by the due date, which is usually three to six weeks before the start of the course. They can be submitted on agency letterhead giving the information requested. Nominations should be signed by an agency official, a training officer, or other person who has responsibility for approving and submitting nominations to the Graduate School.

Tuition:

Prices vary and are included with the individual course descriptions.

For Further Information Contact:

Special Programs Department Graduate School, USDA
277 National Press Building
529 Fourteenth Street, N.W.
Washington, D.C. 20004
Phone: Area Code 202, RE 7–4142

UNIVERSITY COLLEGE

General Information:

The University of Maryland, in all its branches and divisions, subscribes to a policy of equal educational opportunity for peoples of all races, creeds and ethnic origins.

University College offices at College Park and Baltimore are open for counseling during the day and in the evenings. Students desiring counseling should make prior appointments.

The Conferences and Institutes Division develops and conducts for adults a wide variety of non-credit evening classes that meet one or two nights a week. These courses are specially designed to meet the needs of the general public or specific interest groups, and cover a wide variety of subjects. Most courses are offered on the College Park Campus, although some are offered in Baltimore and other locations throughout the State. Typical courses include:

Basic Course in Real Estate
Understanding the Stock Market
Contracting with the Federal Government
Language Arts Laboratory
Reading Improvement Workshop
Review of Mathematics
Introduction to Digital Computing
Contemporary Photography
Leadership and Human Relations
Building Effective Communication

For a current list of all courses or for information on how to initiate a course that meets your particular needs, communicate with the Director of the Conferences and Institutes Division. Telephone: 454–2322.

Who May Attend:

University College initially admits students only under the categories of special student or auditor. A special student is one who either seeks no degree or has not yet qualified for admission as a regular student for the purpose of seeking a degree. Such students must complete 15 hours of work with a grade of "C" or better to be admitted on a regular basis. Auditors are those students who elect to receive neither credit nor grade. They may be registered on a space available basis for single courses only. All applicants must be high school graduates or equivalent.

How To Register:

Each semester, University College publishes a schedule of evening classes, which includes all courses offered in the evening at College Park and in the Baltimore area, as well as courses offered at military installations, other locations throughout the State, and the District of Columbia, including the Pentagon. The schedule is available approximately 30 days prior to the beginning of a new semester. Persons desiring to have a copy mailed to them should telephone either the College Park office—454-2313—or the Baltimore office—955-7430—of University College.

Tuition:

Undergraduate Matriculation Fee—$10.00

Payable at the time of first registration only, by all regular undergraduate and special students.

Undergraduate Student Tuition Fee Per Semester Hour—$20.00

Payable in full at the time of registration. Note: Although University College does not assess a non-resident fee for undergraduates, residency is assigned at the time of first registration for later reference.

For Further Information Contact:

Mr. James R. Quimper
University College
University of Maryland
College Park, Maryland 20742
Phone: 454-2311

UNIVERSITY OF VIRGINIA

Center for Continuing Education
School of General Studies

General Information:

The University of Virginia Center for Continuing Education, Falls Church, Virginia, is the largest of the University's Centers. It offers credit and non-credit courses to adults in approximately fifty locations throughout Northern Virginia.

The center provides courses in the following programs:

- Degree Plan: provides courses for earning a baccalaureate degree.
- Certificate Program: offered upon completion of thirty or sixty semester-hours of credit in required and elective courses.
- Non-credit Courses for Nurses.
- Review courses in the fields of Architecture; Civil, Electrical, Mechanical and General Engineering.
- Program of Non-Credit Courses through Study-Discussion.

Location of Classes

—Arlington County Education Center, 1426 N. Quincy Street, Arlington
—Annandale High School, 4700 Medford Drive, Annandale
—Belle Willard School, 10310 Layton Hall Drive, Fairfax
—Camelot Elementary School, 8100 Guinevere Drive, Annandale
—Center Building, 200 Park Avenue, Falls Church
—Continuing Education Building, 4210 Roberts Road, Fairfax
—Coles Elementary School, 7405 Hoadley Road, Manassas
—Edison High School, 5801 Franconia Road, Alexandria
—(Formerly Eleven Oaks) Administrative Annex Area IV 10515 School Street, Fairfax
—First Christian Church, 6165 Leesburg Pike, Falls Church
—Falls Church High School, 7304 Jaguar Trail, Falls Church
—Gunston Junior High School, 2700 S. Lang Street, Arlington
—George Mason College, 4400 University Drive, Fairfax
—Hayfield High School, 7630 Telegraph Road, Alexandria
—Holmes Intermediate School, 6525 Montrose Street, Alexandria
—John Adams Middle School, 5651 Rayburn Avenue, Alexandria
—James Lee Media Center, 2855 Annandale Road, Falls Church
—J.E.B. Stuart High School, 3301 Peace Valley Lane, Falls Church
—Lake Anne Elementary School, 11510 North Shore Drive, Reston
—Lake Anne Hall, Reston
—Loudoun County High School, 205 Dry Mill Road, Leesburg
—Lynbrook Elementary School, 5801 Backlick Road, Springfield
—Loudoun Valley High School, Purcellville
—McLean Guidance Center, 6869 Elm Street, McLean
—Marshall High School, 7731 Leesburg Pike, Falls Church
—Minnie Howard Middle School, 3801 West Braddock Road, Alxeandria
—Northern Virginia Community College (Central Campus) 8333 Little River Turnpike, Annandale
—Northern Virginia Community College (Eastern Campus) 3443 South Carlyn Spring Road, Bailey's Crossroads
—Oakton High School, 2900 Sutton Road, Vienna
—Oak View Elementary School, 5004 Sideburn Road, Fairfax
—Riverside Elementary School 8410 Old Mt. Vernon Road, Alexandria
—Resurrection Lutheran Church, 6201 N. Washington Boulevard, Arlington
—Swanson Junior High School, 5800 N. Washington Boulevard, Arlington

—T. C. Williams High School, 3330 King Street, Alexandria
—Teaching Materials Center, Independence Hill, Manassas
—Weyanoke Elementary School, 6520 Braddock Road, Alexandria
—Wakefield High School, 4901 South Chesterfield Street, Arlington
—Whittier Intermediate School, Hillwood Avenue and Cherry Street, Falls Church
—Washington-Lee High School, 1300 N. Quincy Street, Arlington
—Woodson High School, 9525 Main Street, Fairfax
—West Springfield High School, 6100 Rolling Road, Springfield
—Yorktown High School, 5201 N. 28th Street, Arlington

Who May Attend:

Men and women who have completed an acceptable secondary high school program.

The GI educational assistance for Vietnam War veterans has been raised 34.6% in the expanded GI bill recently signed into law and the yardstick for measuring full-time study has been reduced to twelve semester hours. This now means qualified veterans, wives, widows or children may have full coverage carrying three or four of the Center courses.

Veterans who have been approved for benefits by Veterans Administration are requested to fill in a special form at the time of registration.

How To Register:

Counseling and testing services designed to assist prospective students in the evaluation of their educational and vocational potentialities and objectives are provided by the University of Virginia Center for Continuing Education. Appointments may be made by calling 532-5800. Appointment hours are Monday through Thursday, 9:00 a.m. to 4:00 p.m. In exceptional cases evening and Saturday morning appointments are available. Counseling is on a first come, first served basis during the period January 4 through February 20. Interpretation of individual entrance test scores on spring testing is available by appointment after March 1.

Upon successful completion of the admission process, students should obtain current catalogs for up-to-date registration information.

Tuition:

Tuition varies and is listed with each course description in the school bulletin.

For Further Information Contact:

200 Park Avenue	4210 Roberts Road
Falls Church, Virginia 22046	Fairfax, Virginia 22030
Phone: 532–5800	Phone: 591–4600, ext. 297
Contact: Mrs. Francis Rawls	Contact: Robert Hawkes

UNIVERSITY OF VIRGINIA
GEORGE MASON COLLEGE

General Information:

George Mason College is an authorized establishment of the University of Virginia to serve the Northern Virginia area. It is a four year College providing programs leading to a Bachelor of Arts degree, the Bachelor of Science degree, and the Bachelor of Science in Education degree. Study is conducted on the traditional semester system.

The College does provide VA benefits.

Who May Attend:

Both men and women are admitted to George Mason College under the same regulations. The college complies with Title VI of the Civil Rights Act of 1964 and does not discriminate on the basis of race, color, religion, or national origin. All applicants must, however, be high school graduates.

How To Register:

Application should be made to the Office of Admissions on forms which are provided upon request. Having been accepted, applicants present themselves to their authorized representatives on the date specified in the Announcements of the college.

For further details, use the contact information given below.

Tuition:

	State	*out of State*
Application Fee	$10.00	10.00
Part-time students (up to 12 semester hours)	$16.00	38.00

For Further Information Contact:

Office of Admissions
George Mason College
Fairfax, Virginia 22030
Phone: Area Code 703, 591–4600

WASHINGTON SATURDAY COLLEGE

General Information:

Washington Saturday College is a volunteer-taught, free Saturday college preparatory program, but also includes a number of various other type courses in response to student and community requests.

Courses are conducted at three locations in space generously provided by Catholic University, D. C. Teacher's College and George Washington University.

All courses are non-credit and operate on the traditional semester system.

Who May Attend:

The Washington Saturday College is open to anyone of high school age or older and who is a resident of the District of Columbia. There are no academic prerequisites for admission.

How To Register:

Registration details may be obtained by using the contact information given below.

Tuition:

Tuition is free.

For Further Information Contact:

Mr. John Malone
5614 Central Ave., S.E.
Washington, D.C. 20019
Phone: Area Code 202, 581-9176

WASHINGTON TECHNICAL INSTITUTE

General Information:

Washington Technical Institute was created by Congress to provide career educational opportunities of the highest quality for the residents of the District of Columbia. The Institute fulfills this mandate by providing District residents an increasing number of degree and certificate programs, both on a full-time and a part-time basis. Programs are offered both on the main campus and at various locations in the community.

Who May Attend:

The courses are open to high school graduates, or equivalent.

How To Register:

Written application for admission must be made on a WTI application form. This form can be obtained by writing to the Office of Admissions at the address below. Upon acceptance into a program of study the applicant will receive an appointment date to register for courses.

Tuition:

Tuition and Fees per Quarter:

	Resident	*Non-Resident*
Tuition	$ 25.00	$ 75.00
Student Activity Fee	5.00	5.00
Sub-Total Regular Fees	$ 30.00	$ 80.00
Estimated Cost, Books and Supplies	$ 75.00	$ 75.00
Approximate Total Cost Tuition and Fees	$105.00	$155.00

The Institute's Office of Financial Aid is available for students who wish to obtain financial assistance through loans or employment or a combination of both.

The Institute is approved for training veterans. The VA Educational Allotments are based on the following credit hour loads:

Full benefit	14 credit hours
Three quarter benefit	10–13 credit hours
One-half benefit	7–9 credit hours
Less than half benefit	6 credit hours or less

For Further Information Contact:

Washington Technical Institute
Office of Admissions
4100 Connecticut Avenue, N.W.
Washington, D. C. 20008
Phone: Area Code 202, 629–7326

YOUNG WOMEN'S CHRISTIAN ASSOCIATION

General Information:

It is the aim of the YWCA to offer, at moderate cost, coeducational courses of sound timely educational values to meet the diverse needs and interests at the adult level. Call ME 8–2100, ext. 29 for further information.

Who May Attend:

Anyone, male or female, 18 years or older.

How To Register:

Call the number listed below for up-to-date registration information.

Tuition:

$5.00 membership, plus cost of course and any required text.

For Further Information Contact:

Mrs. Catherine Parke
Young Women's Christian Association
Adult Education Department
17th & D Street, N.W.
Washington, D. C. 20006
Phone: Area Code 202, ME 8-2100, ext. 28 or 29

VII. Appendix I

COMPLETING HIGH SCHOOL*

SAMPLE PROGRAMS

Twenty-plus Plan (Minimum to graduate)

Course	Unit Credits
English—8th grade, I, II, III, IV	5
Mathematics—8th grade or General plus Algebra I	2
Science—8th grade or General plus Biology	2
Social Studies	
Eighth Grade of Middle School	1
World Geography or World History	1
U. S. History	1
U. S. Government	1
Elective (any field)*	7

*Some transcripts require more than twenty units.

Sixteen Unit Plan (Minimum to graduate)

Course	Unit (Semester) Credits
English I, II, III, IV	4
Mathematics	1
Science—(Biology)	1
Social Studies	
World Geography (or W. History)	1
U. S. History	1
U. S. Government	1
Elective (any field)	7

*NOTE: These are sample programs only; the particular program a student should follow will depend on the individual school he attends and its requirements.

Appendix II

TWO-YEAR CERTIFICATE OR DEGREE* SAMPLE PROGRAM

GEOGRAPHY, CARTOGRAPHY, AND COMMUNITY PLANNING

The Curriculum: The program of study in this curriculum is designed both for those who elect to begin their careers immediately after completing two years and for those who intend to become professionals by transferring to another institution where they may seek a four year degree. In addition, the curriculum includes the College's general requirements for graduation—a group of courses which provide each student the opportunity to broaden his educational horizon. Each of these requirements is shown below.

Basic Program Requirements

	Credits	
GEOGRAPHY	Career Option	Transfer Option
Geography	9	9
Cartography or Planning	6	6
Computer Science	3	3
Electives (to widen job skills)	9–12	–
Social Sciences, Language, or Physical Science	–	6–12
Total Semester Hours	27–30	24–30

	Credits	
CARTOGRAPHY	Career Option	Transfer Option
Cartography and Graphics I, II	6	6
Plane Surveying I, II	4	4

*NOTE: These are sample programs only; the particular program a student should follow will depend on the individual school he attends and its requirements.

Community Planning or Geography	6	6
Computer Science	3	3
Electives (to widen job skills)	9–12	–
Physical Sciences	–	8
Total Semester Hours	28–31	27

	Credits	
COMMUNITY PLANNING	Career Option	Transfer Option
Community Planning I, II	6	6
Politics of Metropolitan Areas	3	3
Cartography or Geography	6	6
Computer Science	3	3
Electives (to widen job skills)	9–12	–
Social Sciences, Language, or Physical Sciences		6–12
Total Semester Hours	27–30	24–30

	Credits	
GENERAL COLLEGE REQUIREMENTS	Career Option	Transfer Option
English	6	–
Humanities	6	–
Mathematics/Science	6–8	–
Social Sciences	6	–
Physical Education	4	–
Electives	12	–
Total Semester Hours	40–42	

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